The Morison Lectures
ON
EPILEPSY.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

BY

WILLIAM ALDREN TURNER, M.D.,
PHYSICIAN TO KING'S COLLEGE HOSPITAL AND PHYSICIAN TO OUT-PATIENTS, NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN SQUARE, LONDON.

LECTURE I.—THE PROBLEM OF EPILEPSY.

THE term "epilepsy" refers to a symptom; it is the clinical expression of a group of diseases which may be to a large extent differentiated from each other. They may be divided into four primary divisions:

1. The organic epilepsies.
2. The early epilepsies.
3. The late epilepsies.
4. Idiopathic epilepsy.

THE ORGANIC EPILEPSIES.

Under this heading are included: (*a*) Those forms of epilepsy arising from traumatic lesions of the skull, brain, or membranes. (*b*) Those associated with or sequential to focal organic disease of the brain, such as tumour or thrombosis.

THE EARLY EPILEPSIES.

The epilepsies of infancy and early childhood have been placed in a subdivision, although it is admitted that they may in many instances be difficult to distinguish from idiopathic epilepsy.[1] Moreover, the two tend to fuse and overlap in later childhood. They are, however, tentatively taken out of the great group of genuine epilepsies, owing to the marked degree of mental impairment, amounting to imbecility or even idiocy, found in most cases. Many cases also are attributable to focal lesions—encephalitis, haemorrhage, and thrombosis. A subvariety is that form of epilepsy which is found with infantile cerebral hemiplegia. I have elsewhere shown that the greatest degrees of dementia are found amongst those epileptics in whom the disease commenced before the fifth year of age, a group also in whom structural stigmata of degeneration are most frequent.

THE LATE EPILEPSIES.

Under this heading are included: (*a*) The epilepsy associated with degenerative cardio-vascular disease; (*b*) the intoxication epilepsies, of which alcoholic epilepsy is the most common; (*c*) the epilepsy which occurs in the late stages of some dementing psychoses; (*d*) epilepsy which springs out of eclamptic conditions, such as uraemia, puerperal eclampsia, etc. Puerperal eclampsia is, in many cases, the acute onset of epilepsy, which is continued in a chronic form by the recurrence of ordinary epileptic seizures, of the major or minor type.

When these epilepsies have been eliminated there still remains a large group, which has received the name of "genuine," "essential," or "idiopathic" epilepsy, a malady arising about the period of puberty, usually without any tangible or ascertainable cause.

IDIOPATHIC EPILEPSY.

Idiopathic, or genuine, epilepsy may be defined as a chronic disease of the brain, characterized by the recurrence of seizures in which interference with consciousness is an essential feature, associated either with convulsions or transient psychical phenomena, occurring usually in persons with a hereditary neuropathic endowment, and eventually leading to more or less permanent mental impairment and dementia.

This definition embraces the manifold symptoms usually included under the term "epilepsy"—such as transient jerks or jumps (*petit mal moteur*), aura sensations, incomplete attacks, psychical epilepsy, automatism, the classical fit, and the psychical epileptic equivalents.

The sole feature necessary to establish the existence of epilepsy is sudden, brief loss or impairment of consciousness. Very characteristic of the epileptic attack is the temporary mental confusion which succeeds the loss of consciousness. During this phase semipurposive actions or automatism may be observed.

In any discussion upon the problem or nature of epilepsy the two primary elements of the disease requiring consideration are:

1. The convulsive element, and
2. The psychical element.

1. *The Convulsive Element.*

The chief characteristic symptom of epilepsy is the periodic occurrence of attacks of loss or impairment of consciousness, sometimes accompanied by convulsions.

It has been laid down as a general principle, notably by Herpin[2] in his classical but little known work upon minor epilepsy, that the symptoms occurring during the interval of the major seizures of this disease, such as cramps, "jumps," twitchings, spasms, partial convulsions, vertiginous attacks, cephalic sensations, visual hallucinations, or other subjective phenomena, are the major or complete seizures reduced to their initiatory symptoms or sensations. All gradations of seizures may therefore be found in the same person, from the aura as the sole representative of the fit, through the incomplete attack to the fully developed epileptic fit, with its phases of tonic spasm and clonic convulsion and the after-stage of coma. Let me illustrate my meaning by aid of a simple case:

An epileptic described his attacks as beginning with a sensation in the epigastric region. The sensation was that of spasm or cramp in the stomach, and was sometimes associated with flatulence and nausea, and occasionally with a desire to go to stool. The spasm or sensation then took an ascending course towards the throat. When it reached the pharynx a sensation of choking was experienced and the saliva collected in the mouth. About this period also an arrest of respiration occurred, probably from a tonic contraction of the respiratory muscles. A feeling of suffocation, usually associated with a sensation of fear and a desire to be alone, then came on. If consciousness was not already abolished the patient called out that he was going to have an attack, and was sometimes able to sit down. The sensation then passed rapidly into the head and consciousness was lost, but sometimes not before the convulsion had already commenced in the muscles of the head and neck. Then followed the usual phenomena of the major convulsive seizure (tonic and clonic convulsion, etc.).

In the intervals of such major seizures the patient experienced minor attacks, sometimes of the epigastric sensation alone, at other times of the epigastric warning with a further development towards the complete fit—namely, the choking sensation, the collection of saliva in the mouth, and the feeling of fear and cardiac oppression, but without the loss of consciousness.

I would especially call attention to these minor attacks as they closely resemble attacks which will be described later on. Their epileptic nature is seen by the fact that they form the aura or initiatory symptoms of an epileptic fit, and by their rapid march, the upward passage of the sensation taking only a few seconds to reach the head.

All epileptics whose major fits commence with a definite and constant warning—whether referred to the limbs, the head, the special senses, or of a psychical nature—have minor attacks consisting solely of the aura, or of the aura with a further development towards the complete attack. In other cases the warning is of a purely psychical character. One patient had as his minor fits—the aura of a "horrible sensation" which always preceded the major attacks. In another the minor seizures consisted either of a "terrible feeling of a most disagreeable character," or of this sensation accompanied by obscuration of consciousness and a fall, but without convulsion.

Attacks of this character are not uncommonly associated with what Hughlings Jackson has called "the dreamy state."[3] This may be of the nature of reminiscence, or it may consist of a sense of unreality, as if surroundings were unfamiliar, or of a sensation that what is happening has been previously experienced. The patient is frequently able to predict whether the incomplete or complete seizure is likely to occur from the intensity of the warning sensation. The feeling of intense fear, with brief loss of consciousness, associated with its physical counterpart of running away as the means of escape, may form the whole of the attack.

In about two-thirds of all epileptics there is no warning of the onset of the seizure, a sudden and complete loss of consciousness occurring either immediately before, or at the same time as, the onset of the tonic phase of the complete major fit.

The minor attacks occurring in the intervals of the complete fits in this group of epileptics are common;

as there is no warning, there is, of course, no incomplete minor seizure without interference with consciousness. The varieties of the minor seizures here form common types of epileptic fits.

A not unusual type of fit is temporary blurring of consciousness with muscular relaxation, so that the patient drops what he is holding, or conversation is momentarily suspended, or he falls. In other cases slight and partial convulsion may be observed. Some cases of this type present features of a purely psychical character, the movements noticed during the attack being not convulsive, but automatic or semipurposive.

The deduction drawn from a study of epileptic attacks, as just described, supports the conclusion of Herpin already given, that the minor attacks occurring in the intervals of the major fits are the initial symptoms of these attacks, which are arrested at a period more or less advanced.

From these few remarks upon the general outlines of epileptic attacks, especially of the minor type, it may be concluded: (1) That some minor fits consist of the aura or warning alone, unattended by loss or even impairment of consciousness; (2) that others consist of the warning sensations with a development towards the more complete fit; these present a certain march of subjective symptoms and terminate with or without some blurring or obscuration of consciousness; and (3) others present the complete or major type of fit.

If there is no warning, the minor attacks consist of lapses of memory, giddiness, falls, and "sensations," with or without slight spasm or convulsions, but always with some interference with consciousness.

Although the common clinical type of epilepsy is the combined form or that in which minor or major seizures are found in the same person, yet other types or clinical groupings of fits are by no means unusual. Thus, we find groupings limited to the major or the minor type of seizure respectively. There is also a type in which major or minor seizures occur in series of a score or more from time to time (serial epilepsy). Again, there is the acute form of epilepsy known as the status epilepticus, in which one fit follows another so closely that the after-stage of coma gives place to the succeeding fit, without any return to consciousness.

From a study of these phenomena it would therefore seem logical to conceive the paroxysmal and interparoxysmal symptoms of epilepsy as links of a chain and not as isolated features. There may be found in the same person all stages of the fit, from the simple aura through the incomplete attack to the fully developed epileptic fit.

Whatever explanation, therefore, may be offered as the immediate cause of a convulsive seizure must also explain the interparoxysmal spasms, cramps, and aura sensations.

Applying the same principle to the clinical groupings of fits, all degrees of combination may be studied, from short series of incomplete minor fits through serial outbursts to the picture of the acute status epilepticus. Short series of minor or major fits are stages towards serial epilepsy, which is merely a less acute and more drawn-out form of status epilepticus.

2. *The Psychical Element.*

The recognition of the psychical element as a constituent of epilepsy has materially widened the range of epileptic manifestations. Some writers have gone as far as to relegate the convulsive element to a subsidiary position, and to place "periodic fluctuations of the psychical equilibrium" as the outstanding feature of the disease. It is now generally accepted that certain paroxysmal psychical symptoms occurring in epileptics may replace from time to time the convulsive seizures, and form what are known as psychical epileptic equivalents, and that transient disturbances of consciousness of a psychical character may be the sole evidence of an epileptic attack (psychical epilepsy).

The psychical element in epilepsy may be studied under three conditions:

(*a*) In the epileptic temperament.
(*b*) As the paroxysmal symptoms preceding, succeeding, or replacing the convulsions.
(*c*) In the permanent dementia.

(*a*) *The epileptic temperament* has many features common to epilepsy and the several forms of mental deficiency. Epileptics are on the whole self-opinionated and egotistical, possessing a conceit and assurance out of all proportion to their achievements. Their character is unstable, their mental perspective is disproportioned; they are sometimes conspicuous for their tenacity, which often reaches to obstinacy. Their conversation is usually prolix and pretentious. They frequently exhibit a religious fervour, which contrasts strangely with their actions, as their ideas of right and wrong are often vague. Like most mental defectives, their actions are characterized by indecision and doubt, by an exaggerated self-consciousness, by apprehensions and fears, by feebleness of will power and hesitancy, which prevent resistance to certain impulsions and decisive action.

(*b*) *The paroxysmal psychical phenomena* of epilepsy stand in three ways to the convulsive attacks. Some are found as prodromal symptoms of the seizures, others as immediate sequelae, and a third group, occurring in the interparoxysmal periods, are believed to replace the convulsions, and are in consequence known as psychical epileptic equivalents. The paroxysmal psychical symptoms are grouped under the general term of "epileptic insanity."

The preparoxysmal mental symptoms are in reality prolonged or modified phases of the prodromal stage. They consist of irritability, apprehensions, feelings of unreality, lethargy, and occasionally hallucinations. They may precede the fit by one or more days. On the other hand, they may consist of sudden impulsions, the patient doing some strange thing and then suddenly falling down in a fit.

The post-paroxysmal mental symptoms are the immediate sequelae of either single seizures, or more commonly of serial outburst, or the status epilepticus. They are inseparable from the convulsions, and disappear after a longer or shorter interval, but give in some instances a decidedly psychical character to the paroxysms.

The most frequently observed are: (1) Acute amentia or stupor, which resolves slowly during the course of days or even weeks. (2) Acute mania, or excitement, of shorter duration than the preceding, but often of intense severity. Minor varieties of this are seen in phases of talkativeness, tiresomeness, and exhilaration of spirits. (3) Transitory delusional states, and (4) automatism. Most minor fits are succeeded by some kind of automatic action, such as "exhibition," wandering or confusion of action.

The psychical equivalents are especially interesting forms of epileptic psychical phenomena. The following features may be accepted as a satisfactory reason for regarding them as equivalents of epileptic convulsions:

1. The occurrence in the family history of similar or allied conditions, interchangeable with attacks of genuine epilepsy.

2. Their association in the same person with the classical types of epilepsy, more especially at the catamenial epochs in women.

3 A certain uniformity in the type of attack, recurring paroxysms reproducing the features of former attacks.

In any particular case the psychical equivalents usually correspond to those mental phases which are directly associated with the convulsions. Thus:

1. An epileptic, whose post-convulsive symptoms were irritability, quarrelsomeness, and pugnacity, had occasional transitory attacks of a similar kind without any antecedent convulsion.

2. Another had in the interparoxysmal periods attacks of the "dream state," which usually preceded his fits.

3. A third epileptic, whose post-convulsive symptoms were catatonic rigidity and stupor, showed from time to time in the intervals of his fits catatonic stupor states, unassociated with convulsion.

These are not uncommon types of psychical epileptic equivalents. But there are others; such are epileptic impulsions (*petit mal intellectuel*, of the French writers), acute maniacal outbursts, or *grand mal intellectuel*, and transitory delusional states.

Pure Psychical Epilepsy.

There is no doubt that a form of genuine epilepsy exists, characterized by short seizures of purely psychical type. These attacks consist of simple automatic actions performed by the patient in an unconscious state; the face is usually pale, and has a fixed staring expression. There is no subsequent recollection of what has occurred during

the seizure, although in some cases there would appear to be a state of subconsciousness, in which the patient may hear vaguely what is said but yet be unable to reply to questions. The attacks are characterized by sudden onset, and usually occur without warning. They are of short duration, and recovery is rapid.

For example, a woman who was employed in a laundry performed during her attacks the movements of folding clothes, which she was in the habit of doing at her work. Other patients will rise from table and walk into an adjoining room, where they will perform some action entirely different from that which they were doing immediately prior to the attack. Other instances may be given. Thus, Spratling mentions a case of an epileptic whose duty it was to address letters in the office; if an attack came on, she would repeat the same name and address several times during the seizure. Another always got a broom and proceeded to sweep the floors when the attack came on.

They may be regarded as constituting one of the types of minor epilepsy, but differing from the common *petit mal* seizures by the purely psychical character of the fit. In the ordinary forms of minor epilepsy the stage of automatic action is preceded by transient motor spasm or convulsion.

EPILEPTIC DEMENTIA.

In addition to the paroxysmal psychical symptoms, there is observed in all cases of confirmed or old-standing epilepsy an almost constant and characteristic interparoxysmal mental state, presenting features of great uniformity. The general features of this mental condition, or epileptic dementia, consist of all grades of mental deficiency, from a defect of memory, more especially for recent events, up to pronounced dementia. This should be regarded as an integral part of the confirmed disease, modified to some extent by the duration, the frequency and the character of the fits.

The existence of this dementia is of value in the differential diagnosis of epilepsy from some of the allied conditions which will be subsequently described.

COURSE.

Epilepsy is most commonly found in a chronic form, with periodic seizures recurring through many years, sometimes a lifetime, but in some cases showing prolonged and remarkable remissions. The frequency of the seizures may vary from one, two, or three, or even less, in a year, to as many as a score or more in twenty-four hours.

A cure occurs in a small proportion of cases, estimated at from 10 to 12 per cent. These are cases in which the seizures are of infrequent occurrence, in which there is little or no mental impairment and in which the bromide salts are well borne.

Having in this fashion briefly defined what is meant by idiopathic epilepsy, it is necessary now to ascertain whether there are any associated pathological changes in the brain or central nervous system.

PATHOLOGICAL ANATOMY.

It is difficult to obtain *post-mortem* examinations on recent cases of the disease, or on those cases characterized by seizures occurring only at long intervals; but it would appear as if genuine epilepsy was a disease which in its early stages was unassociated with any obvious structural changes in the brain or central nervous system. In old-standing cases, however, the morbid changes found after death are well recognized, and have been described by numerous writers. Dr. John Turner[4] has found atrophy and sclerosis of some part of the central nervous system in considerably more than 50 per cent. of the cases of idiopathic epilepsy. Alzheimer[5] found acute and chronic changes in 60 per cent. of all cases examined.

In the *nerve cells* the changes vary from slight degrees of chromatolysis to advanced atrophic degeneration. The extent of the change would seem to depend largely, if not entirely, upon the mode of death. Certain nerve cells, showing well-marked eccentration of the nucleus, which is usually of a globose character, are stated by Dr. John Turner to be typical of low-grade brains, and to represent an embryonic type of nerve cell. He regards these cells as stigmata of degeneration, and indications of a hereditarily acquired nervous instability.

The *vascular changes* consist of dilatation and atrophy of the blood vessel walls, perivascular infiltrations, and punctiform haemorrhages. The lymph spaces are dilated and contain a foam-like exudate. Hyaline spheres or lobulated bodies are seen lying free in the lumen of the smaller vessels and capillaries, and sometimes large hyaline masses form casts of the vessels in which they lie.

Neuroglia.—There is an increase of the glial tissue, especially that situated in the outer layers of the cortex, and of the cornu Ammonis. The meninges generally show slight fibroid thickening and a moderate leucocyte infiltration. Rupture of the vessels with extravasation of red blood corpuscles and a delicate unorganized foam-like exudate are always present.

The lesions found in the brains of epileptics are of wide distribution. The cerebellar membranes are often more affected than the cerebral. The glial changes are distributed unevenly over the whole surface of the cerebrum, but some regions are more especially involved, namely, the frontal and occipital regions, the cornu Ammonis, and the gyri around the fissure of Rolando.

It is now the generally accepted view that the changes just described are the effects and not the cause of the seizures in epilepsy. The acute or cell changes vary according to the manner of death, and the chronic or glial changes are dependent to a great degree upon the duration and severity of the disease. The most acute changes are found in the brains of persons dying in the status epilepticus (Alzheimer), and the most pronounced degrees of gliosis are observed in the brains of those in whom the disease was of long standing, and characterized by the severer grades of mental deficiency and dementia. Frequent repetition of epileptic fits brings about destructive changes in the nerve cells and fibres, whose place is taken by proliferated neuroglial elements. Hence there ensue, in the later stages of the disease, pronounced mental deterioration, and a slow and slouching gait, so well known to those conversant with the late stages of the confirmed malady.

ETIOLOGY.

In furtherance of the discussion upon the problem of epilepsy, three factors bearing upon the causation of the disease have now to be taken into consideration. These are:

1. The predisposing causes.
2. The exciting causes.
3. The immediate cause of individual seizures.

The Predisposing Causes of Epilepsy.

A statistical investigation of a large number of cases of epilepsy shows equal percentages with and without a history of ancestral neuropathic disorders. Even allowing about 20 per cent. for those in whom the family history may be either unknown, forgotten, or withheld, there still remains about 30 per cent. of all cases of epilepsy in which a history of family predisposition cannot be obtained.

Some explanation ought, therefore, to be forthcoming of so large a proportion of cases in which, on careful inquiry, no obvious heredity is obtainable. The existence of epilepsy in some of these cases may be partly explained by the presence of a diathesis, infective disorder, or intoxication in one or other parent at the period of conception.

It is not unlikely also that the presence of some symptoms, classified under the general term of "nervousness," may be of great importance in the genesis of epilepsy. Inquiries ought to be made into the question of parental neurasthenia, hysteria, migraine, or periodic headache, psychasthenia, obsessions, tics, chorea, and, in particular, those epileptoid symptoms which will be referred to in the account of the borderland of epilepsy. These are symptoms which do not, as a rule, strike the patient or his friends as of any importance in the causation of fits, nor does the physician usually direct his attention towards them.

A further explanation of some of these cases may be found in the presence of small foci of encephalitis or of thrombosis occurring in infancy or early childhood. In many of these cases resolution has so largely taken place that the only permanent defect is some impairment in the finer movements of one or other hand. Defects of this character should always be looked for in cases in which no clear predisposition is ascertained, or where the absence

of well marked "stigmata" suggests that a hereditary influence is not obtrusive. I find it impossible, however, to support the views of Freud, Marie, and others, that all cases of epilepsy are due to organic affections of a focal character occurring in early life, although it is quite clear that a small group of apparently genuine epilepsies arises in this way.

My earlier figures, taken from 676 cases of epilepsy, reveal the fact that the most common predisposing cause of epilepsy is ancestral epilepsy. In a further series of 214 cases, in which parental alcoholism as a predisposing influence was especially inquired into, the same conclusion was arrived at—namely, that ancestral alcoholism was a relatively minor factor compared with ancestral epilepsy in the causation of the disease.

Table I.

	First Series.	Second Series.
No heredity known ...	330, or 49.0 per cent.	106, or 49.5 per cent.
Epilepsy	252, or 37.2 ,,	81, or 37.8 ,,
Insanity	37, or 5.4 ,,	7, or 3.2 ,,
Alcoholism...	21, or 3.1 ,,	15, or 7.0 ,,
Other Disorders	36, or 5.3 ,,	5, or 2.3 ,,
	676, or 100 per cent.	214, or 99.8 per cent.

This is a point of especial interest when comparisons are made between figures obtained in different countries. The outstanding feature of Table II is the enormous percentage frequency of alcoholism noted by the French observers, an ancestral disposition far outweighing the combined percentages of epilepsy and insanity, according to Déjerine's figures. The German figures, on the other hand, show the predominating influence of insanity, whilst the American give almost equal prominence to epilepsy and alcoholism.

Table II.—*Showing the Percentage Frequency of Epilepsy, Insanity and Alcoholism as Predisposing Factors in Epilepsy.*

	Déjerine.	Binswanger.	Spratling.	Turner.
	Per cent.	Per cent.	Per cent.	Per cent.
Epilepsy...	21.2	11.0	16	37.0
Insanity...	16.8	29.6	7	4.8
Alcoholism	51.5	22.0	14	4.0
No heredity	—	—	—	47.0
Totals	350 cases	150 cases	1,070 cases	890 cases.

Stigmata of Degeneration.

Evidence of a family neuropathic tendency may be found in what are known as "stigmata" of degeneration.

Structural stigmata have formed the subject matter of considerable investigation since attention was directed to their importance by the writings of Morel and Moreau (of Tours). In the most pronounced forms of mental deficiency, such as are seen in imbeciles and idiots, anatomical variations from the normal are frequent and well marked.

In the slighter forms of neuroses, such as neurasthenia, migraine, and simple melancholia, the neuropathic stigmata are less frequent and less pronounced than are seen in the more exaggerated conditions above mentioned.

In epilepsy, as in the other degenerative neuroses, stigmata of degeneration are present, and have received considerable attention. In addition to the cranial asymmetry which Lasègue[6] considered to be constant in true epilepsy, Féré[7] has called attention to the frequency of cranio-facial asymmetry amongst epileptics. Among other features of a degenerative character, the configuration of the hard palate deserves special attention. This has been the subject of much investigation and discussion, and its study and relation to the several degenerative neuroses is associated with the names more especially, in this country, of Langdon-Down and Clouston.[8] Deformities of the ears have for long been regarded as important structural stigmata of degeneration. Abnormal implantation of the teeth in connexion with epilepsy and the developmental neuroses has recently been the subject of careful investigation by Talbot.[9]

In addition to the above-mentioned stigmata, Féré has also drawn attention to, and described in detail, various asymmetries of the thorax and pelvis, unequal length and size of the limbs, and syndactylism, found in epileptics. In whatever form they are found, it has to be borne in mind that stigmata of degeneration are deviations from the normal, and occur in those who are subjects of a hereditary degenerative predisposition.

Of the two quinquennial periods in which the onset of epilepsy is more common, that from birth to five years of age is the most fruitful in stigmata. It is during this period that the growth and development of the brain is most active; and it is during this period, as Clouston has shown, that other degenerative neuroses and psychoses develop—such as stammering, backwardness in walking and talking, delayed dentition, and some forms of idiocy and imbecility.

Amongst epileptics in whom the disease commences about the time of puberty, quite a considerable number present no obvious structural stigmata, even when parental epilepsy was given as the probable cause of the disease. The most common stigma observed in epileptics is a deficiency in the physical development. Many epileptics are, on the other hand, physically well formed.

The general conclusions which may be made from a study of the stigmata of degeneration in epilepsy are:

1. That the absence of a family neuropathic history is of little account in face of well-marked structural signs of degeneration.
2. That the early epilepsies, or those commencing under five years of age, show not only the most marked mental defects but also are the most prone to stigmata.
3. That stigmata are most common in that type of epilepsy known as the combined seizure type, which is the most intractable and most dementing form of epilepsy.
4. That stigmata are common in those cases of confirmed disease which go on to marked dementia.

I therefore look upon the presence of well-marked degenerative stigmata in epilepsy as a factor of great importance. The future course of the malady may be gauged to some extent by their study.

Age of Onset.

The age at which epilepsy arises is an important factor in the study of the predisposing causes. Although there is no age-period which may be regarded as entirely exempt, there are certain age-epochs during which the onset of epilepsy is more common.

The first epoch is from birth to 5 or 6 years, or that period corresponding to infancy and early childhood. About 25 per cent. of all cases commence during this epoch. These cases are usually associated with marked mental deficiency or backwardness. Many of them are based upon organic lesions of the brain.

The second epoch is from 10 to 22 or 23 years of age, or that period corresponding to puberty and early adolescence. No less than 54 per cent. of all cases commence during this epoch. It is *par excellence* the age of onset of genuine epilepsy. The mean age of maximum onset is 14 years, but the onset of the disease in young women is later by about two years than in the male sex.

The third epoch embraces the remainder of life. There is a rapidly lessening tendency towards the onset of genuine epilepsy from the age of 30 onwards. Most of the epilepsies occurring in this epoch are founded upon organic lesions, arterio-sclerosis, or intoxications (alcohol, lead, etc.).

From these facts it is obvious that genuine or idiopathic epilepsy is a disease of youth, coming on at a time when the development and growth of the central nervous system and the maturation of the organs of reproduction are taking place. It is during this period that causes, insignificant or insufficient in stable nervous systems, may light up the tendency to convulsion or epilepsy in those hereditarily prone towards it.

The Exciting Causes of Epilepsy.

I have attempted to show that the predisposing cause of epilepsy is, in the majority of cases, an inherited neuropathic disposition, and that epilepsy may arise independently of any exciting or determining cause, being a spontaneous development attributable to the normal processes of brain growth and sexual maturation in predisposed persons.

In a number of cases, however, some exciting influence is at work in the production of the first epileptic seizure. It is a cardinal principle that the cause of epilepsy is that circumstance to which the first fit is apparently due. The instability of the brain, once induced, becomes a characteristic feature, so that further attacks recur quite independently of the original or any other obvious exciting cause.

The common period for the onset of epileptic fits is puberty, and in girls its onset is frequently accompanied by irregularity in the catamenia. There is little or no evidence to support a popular view that the regular establishment of the monthly period is attended by arrest of the seizures in those in whom the disease has arisen a few years earlier. The relation of epileptic fits to menstruation is well established. In most cases the seizures occur immediately before or shortly after the period, and in chronic cases the monthly period is characterized by an increase in their frequency.

The normal process of pregnancy has also some influence in the causation of epilepsy in women. We find that pregnancy may be the exciting cause of the disease in some cases, that it may induce a relapse of the seizures in cases in which a cure has apparently been established or in which a long remission has occurred. On the other hand, pregnancy has been known to produce a temporary arrest or amelioration of fits, and there are well-authenticated cases in which a permanent arrest has been brought about in this way. Accouchement and the puerperium have also an important bearing upon epileptic fits. I have seen a number of cases in which the disease clearly originated at this time in the form of a puerperal eclampsia and persisted for many years as confirmed epilepsy. These cases are interesting, as they argue in favour of the view originally propounded by Féré—that some types of puerperal eclampsia are merely the onset of epilepsy in an acute form in predisposed persons.

Sleep is another physiological condition eminently favourable to the onset of epileptic fits. In many cases fits only occur during sleep, so that a clinical type has been recognized as nocturnal epilepsy. There can be no doubt that cases of nocturnal epilepsy may exist unrecognized for many years, until a convulsion in the daytime establishes the existence of the disease. Voisin mentions the following phenomena as suggestive of the nocturnal form: Intermittent wetting of the bed, occasional periodic and temporary mental dullness and irritability, well-marked lapses of memory, somnambulism, and unexplainable outbursts of temper. Pick has called attention to the frequency of fits during the hours of deepest sleep—namely, during the first hour or two after falling off to sleep, and again before waking. My own observations show that the greatest number of fits occur during the hour or two after falling off to sleep—a period which probably coincides with the greatest degree of cerebral anaemia. Whether these facts are to be explained on the theories of brain anaemia (Pick), of lessened inhibitory control (Clark), of the alkaline tide (Haig), or of increase in the rate of blood coagulation (Turner),[10] are points on which evidence is insufficient.

A second and smaller group of epilepsies is found in which a definite extraneous cause acts as the excitant of the first fit, and, as such, of the disease. These causes may be:

1. *Psychical influences*, such as emotional excitement, fear, shock, anxiety, grief, or overwork. Gowers, in particular, regards this as the most potent of all the immediate causes of epilepsy. It was the ascribed cause in only 4 per cent. of my cases, being twice as common in females as in males. In most of the cases a strong neuropathic predisposition was found.

2. *Infective diseases.* The most frequent is scarlet fever, but measles, pertussis, influenza, and diphtheria, have also been observed. An interesting feature in this connexion is the occasional temporary arrest of the fits in consequence of an attack of pyrexia, probably due to the arrest in the chloride excretion with corresponding retention of bromide salts (Hoppe).

3. *Reflex causes* play an important part as excitants of epilepsy, more especially in children and young adults predisposed by heredity to nervous instability. I would especially call attention to the necessity of a careful examination of the nose (for adenoids, polypi, or foreign bodies), of the eyes (for errors of refraction), of the ears (for chronic otorrhoea), of the teeth, the genital organs, the stomach, and of the intestine (for the presence of worms).

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OPTIC NEURITIS AND SUPPURATIVE OTITIS.

A FURTHER INVESTIGATION INTO THE FREQUENCY AND SIGNIFICANCE OF OPTIC NEURITIS AND OTHER VASCULAR CHANGES IN THE RETINAE OF PATIENTS SUFFERING FROM PURULENT DISEASE OF THE MIDDLE EAR.

BY

J. STODDART BARR, M.B., CH.B.,

ASSISTANT DISPENSARY SURGEON FOR DISEASES OF THE EAR, GLASGOW WESTERN INFIRMARY; ASSISTANT SURGEON, GLASGOW HOSPITAL FOR DISEASES OF THE EAR, NOSE, AND THROAT, ETC.

AND

JOHN ROWAN, M.B., F.R.F.P.S.G.,

OPHTHALMIC SURGEON, GLASGOW ROYAL INFIRMARY; OPHTHALMIC SURGEON, GLASGOW HOSPITAL FOR DISEASES OF THE EAR, NOSE, AND THROAT, ETC.

A PAPER by us on this subject, giving the results of the examination of the eyes and ears in 100 consecutive cases of purulent middle-ear disease, appeared in the BRITISH MEDICAL JOURNAL of November 23rd, 1907. Since then we have continued this investigation, and examined a second series consisting of 60 cases, and the results of these, along with those of our first 100 cases, are embodied in the present article; the conclusions arrived at, therefore, are founded upon the examination of the eyes and ears of 160 cases. Where possible, each individual case has been kept under observation until the termination of the ear affection in recovery, either as the result of local treatment or after operation. Of the 160 cases, 100 presented themselves after an interval of several months for a second ophthalmoscopic examination, and quite a number were seen three or four times.

We desire to emphasize the special importance, when examining the eyes in this class of case, of duly considering the effects of age, occupation, eye strain, and errors of refraction. These considerations constituted at first the greatest difficulties we had to contend with, and explain the large residue of 46 doubtful cases. A wider experience of the types met with has to a large extent obviated these difficulties

The plan of this paper is, first, to give the results of the examination of the second series of 60 cases, comparison being made, in tabulated form, with those of the first series of 100 cases; secondly, to present the results obtained from the total number (160 cases); thirdly, to discuss one or two of the more interesting problems in connexion with optic neuritis of otitic origin; and finally, to state briefly the conclusions arrived at as the result of our investigations.

I.—THE EXAMINATION OF THE SECOND SERIES (60 CASES).

As in our first series of cases, the aural examination included: (1) A history of the ear affection; (2) the testing of the hearing distance by a watch normally heard at 36 inches; (3) the application of Rinne's and Weber's tests when the age of the patient permitted, a tuning-fork

of 128 vibrations being used; and (4) the state of the middle ear, especially the tympanum and tympanic membrane, such points as the situation of the perforation, the amount and character of the discharge, the presence or absence of granulation tissue or of cholesteatoma being carefully noted. The results of this examination are given in Table I along with those of the first series.

The examination of the eyes generally preceded that of the ears, and consisted in testing (1) the visual acuity by Snellen's and Jaeger's test types; (2) the eye movements and the pupillary responses to light and accommodation; and (3) the refraction by the shadow test and by direct estimation. The ophthalmoscopic examination was then made, the pupils being dilated when necessary. Before deciding as to the state of the fundus, the possible effects of age, occupation, errors of refraction, and eye strain were in each case carefully considered, so as to eliminate, as far as possible, such common causes of vascular changes in the retina. Even after a liberal allowance had been made for these the frequency of vascular changes—varying in intensity, but amounting in some of the cases even to marked optic neuritis—was surprising.

Results of the First Examination.

It will be seen by referring to Table III, Class 1 (B), that out of 60 cases there were 34 (Division 1) in which the eyes were emmetropic, and of these 16, or 47 per cent., showed evidences of vascular engorgement, varying from marked fullness and tortuosity of the veins with a pinkish condition of the optic disc, to definite optic neuritis. In Division II, which includes only 26 ametropic cases, 8, or 20.7 per cent., were, in spite of the strict censorship, regarded as showing vascular changes of an abnormal character. It will be noted that the percentage of cases in this series showing vascular engorgement is considerably less (38 8 per cent) than in the first series, where it amounted to 72 per cent. This difference is probably accounted for by the even greater stringency practised in dealing with doubtful cases in the second series. There were, therefore, out of a total of 60 cases examined, 24 in which definite vascular engorgement of the fundi existed. Of these 24, 2 showed marked double optic neuritis, 4 indicated slighter degrees of optic neuritis, and 1 presented the appearance of a neuritis passing into atrophy, while in 17 there were vascular changes of a lesser degree in the fundus.

In Table III, Class II (B), the results of the examination of those which appeared a second time (40 out of the 60) are compared with the first examination, including both the eyes and the ears. These results are strikingly similar to those of the first series (Table III, Class II A). Tables IV and V may also be compared with those of the first series and the remarkable similarity of the results noted.

II.—RESULTS OF EXAMINATION IN FIRST AND SECOND SERIES COMBINED (160 CASES).

The results of our examination of the second series of cases, limited though these may have been, have corroborated in a striking manner those of our first series. By combining the two series, thus bringing the total number of cases up to 160, the value of the results is, we think, considerably enhanced.

Frequency of Optic Neuritis.

At the first examination of the series of 100 cases optic neuritis was discovered in 4. In our second series of 60 cases 6 showed definite optic neuritis, and 1 the appearance of a neuritis passing into atrophy—7 in all. Optic neuritis occurred 11 times in the 160 cases of purulent middle-ear disease—that is, in 6 8 per cent. Of these cases of optic neuritis, 1 case, suspected at first of being a mastoid empyema, recovered under conservative treatment in three months; upon 3 the radical mastoid operation was performed, 3 now await operation, and 4 have been lost sight of (one being a case of suspected mastoid empyema). At a second examination of 100 of these 160 cases, made some months afterwards, 3 which had shown simple vascular engorgement at the first examination had progressed to distinct optic neuritis. One[1] of these developed alarming symptoms (headache, vomiting, and paralysis of the sixth and seventh cranial nerves) a radical operation was performed, when a perisinous abscess was found; a second was lost sight of, and the third awaits operation.

TABLE I.

A.—*Results of the Examinations of the Ears of 100 Patients (First Series).*

Sex.		Age.		Cause.		Symptoms.		Ear affected.	
Males	52	Under 15 years	35	Scarlet fever	13	Otorrhoea	100 cases	Both ears	30 cases.
Females	48	Between 15 and 30	45	Measles	8	Impaired hearing	99 ,,	Right ear	40 ,,
		Over 30	20	Whooping-cough	1	Earache	28 ,,	Left ear	30 ,,
	100		100	Pneumonia	1	Tinnitus	36 ,,		100 affected ears.
				Erysipelas	1	Giddiness	24 ,,		
				Accident	1	Headache	43 ,,		
				Foreign body	1				
					26				

In 71 per cent. the disease commenced under 15 years of age.

Evidences of past suppuration in 25 ears.

Hearing.		Granulations or polypi	present in 50 ears
2 inches and under	82 ears	Cholesteatoma	,, 6 ,,
Above 2 in. and under 12 in.	28 ,,	Perforation in membrana flaccida	,, 5 ,,
12 in. and over	12 ,,	Nipple-shaped perforation	,, 1 ,,
Too young	5 ,,		62 ears
Not given	3 ,,		
	150	Chronic otitis media purulenta in	123 ears
		Acute ,, ,, ,,	7 ,,

Tuning-fork Tests.
In 34 cases in which one ear alone was affected, the other being *normal*, Rinne was negative, and Weber referred to the affected side in 30 cases.

B.—*Results of the Examinations of the Ears of 60 Patients (Second Series).*

Sex.		Age.		Cause.		Symptoms.		Ear Affected.	
Males	36	Under 15 years	18	Scarlet fever	10	Otorrhoea	60 cases	Both ears	5 cases.
Females	24	Between 15 and 30	29	Measles	11	Impaired hearing	60 ,,	Right ear	29 ,,
		Over 30	13	Whooping-cough	1	Earache	21 ,,	Left ear	26 ,,
	60		60	Pneumonia	1	Tinnitus	23 ,,		65 affected ears.
				Cold	3	Giddiness (slight	5 ,,		
				Sore throat	2	Giddiness (marked	9 ,,		
				Burn	1	Headache (slight	17 ,,		
					29	Headache (marked	21 ,,		

Evidences of past suppuration in 31 ears.

Hearing.		Granulations or polypi	Present in 33 ears
2 inches and under	40 ears	Cholesteatoma	,, 10 ,,
Above 2 in. and under 12 in.	19 ,,	Perforation in membrana flaccida	,, 6 ,,
12 in. and over	5 ,,		49
Too young	1 ,,		
	65	Chronic otitis media purulenta in	63 ears
		Acute ,, ,, ,,	2 ,,

Tuning-fork Tests.
In 56 discharging ears, Rinne was negative in 54. In 46 cases of unilateral suppuration, Weber was referred to the affected side in 34, was indefinite in 6, and referred to the unaffected side in 6.

TABLE II.—REFRACTION OF THE 100 CASES (FIRST SERIES).

Examination of 200 Eyes: 108 Emmetropic (Both Eyes), 3 (One Eye).

The Refraction of the Ametropic Eyes was as follows:

Hyperm.	Hyperm. Astig.	Myop.	Myop. Astig.	Mixed Astig.	Refraction not Stated.
26	27	10	5	19	2, i.e., one case

Emmetropic	112
Ametropic	87
Not given	2
Total	200

REFRACTION OF THE 60 CASES (SECOND SERIES).

Examination of 120 Eyes: 68 Emmetropic (Both Eyes), 7 (One Eye).

12	10	8	8	7	0

Emmetropic	75
Ametropic	45
Total	120

TABLE III.

Class I.—A. 100 Cases. Results of First Eye Examination (First Series).

		Number showing vascular changes:—	Normal.
Division I.—Emmetropics	54	39, or 72·2 per cent.	15
Division II.—Ametropics	46	33, or 71·7 per cent.	13
	100	72, or 72 per cent.	28

B. 60 Cases. Results of First Eye Examination (Second Series).

Division I.—Emmetropics	34	16, or 47·0 per cent.	18
Division II.—Ametropics	26	8, or 30·7 per cent.	18
	60	24, or 38.8 per cent.	36

Class II.—A. 60 Cases. Examined Twice—Ears and Eyes (First Series).

	No.	Normal.	First Examination of Eyes (vascular changes).	Second Examination of Eyes.	Second Examination of Ears.
Division I.—Emmetropics	34	7	27	14 unchanged	10 unchanged or worse. 4 improved.
				2 improved	1 healed for six months. 1 no change.
				11 worse	9 unchanged or worse. 2 improved.
Division II.—Ametropics	26	6	20	13 unchanged	9 unchanged or worse. 4 improved.
				4 improved	3 improved. 1 unchanged.
				3 worse	3 unchanged or worse.
	60	13	47		

B.—*40 Cases. Examined Twice—Ears and Eyes (Second Series).*

Division I.—Emmetropics	20	8	12	6 unchanged	4 unchanged or worse. 1 improved. 1 radical.
				3 improved	1 improved. 1 unchanged. 1 radical.
				2 worse	2 unchanged or worse.
Division II.—Ametropics	20	12	8	3 unchanged	1 radical. 2 unchanged or worse.
				3 improved	1 radical. 2 unchanged.
				2 worse	1 unchanged. 1 worse.
	40	20	20		

TABLE IV.

First Series.

A.—Cases showing distinct vascular engorgement at the First Examination:

20

Progress of the Ear condition subsequent to the First Examination:

15 per cent. healed or improved.
85 per cent. unchanged or required radical.

B.—Cases showing normal fundi at First Examination:

13

61·5 per cent. healed or much improved.
38.4 per cent. unchanged or required radical.

NOTE.—In 40 per cent. of the 38.4 per cent. the treatment was completely neglected.

Second Series.

A.—Cases showing distinct vascular engorgement at the First Examination:

12

Progress of the Ear condition subsequent to the First Examination:

16.6 per cent. healed or improved.
83·4 per cent. unchanged or required radical.

B.—Cases showing normal fundi at First Examination:

20

60 per cent. healed or improved.
40 per cent. unchanged.

TABLE V.
First Series.

EYE.	EAR.
Condition of the fundi at the Second Examination compared with the condition of the First Examination:	Progress of the Ear condition as shown at the Second Examination:
27 unchanged	19 unchanged or worse. 8 improved or healed.
6 improved	3 improved or healed. 3 unchanged.
14 worse	12 unchanged or worse. 2 improved.
Second Series.	
9 unchanged	6 unchanged or worse. 2 improved (1 after radical).
5 improved	3 unchanged. 3 improved (2 after radical).
4 worse	4 unchanged or worse.

TABLE VI.
160 Cases. Results of First Eye Examination (Combined Series).

	No.	Normal.	Results of First Eye Examination (vascular changes).
Division I.—Emmetropics	88	33	55=62.5 per cent.
Division II. Ametropics	72	31	41=56.9 per cent.
	160	64	96

TABLE VII.

	No.	Normal.	First Examination of Eyes (vascular changes).	Second Examination of Eyes.	Second Examination of Ears.
Division I.—Emmetropics	54	15	39*	20 unchanged	14 unchanged or worse. 6 improved (1 after radical)
				5 improved	3 healed (1 after radical). 2 unchanged.
				13 worse	11 unchanged or worse. 2 improved.
Division II.—Ametropics	46	18	28	16 unchanged	11 unchanged or worse. 5 improved (1 after radical)
				7 improved	3 improved (1 after radical). 4 unchanged.
				5 worse	5 unchanged or worse.
	100	33	66		

* One case has been withdrawn from this list, as owing to defective intelligence no dependence could be placed upon the results of the examination. Vascular engorgement was present in the left eye.

TABLE VIII.

A.—Cases showing distinct vascular engorgement at First Examination:	Progress of the ear condition subsequent to the First Examination:
32	15.8 per cent. healed or improved.
B.—Cases showing normal fundi at First Examination:	
33	60.75 per cent. healed or improved.

TABLE IX.

SECOND EXAMINATION OF EYES.	SECOND EXAMINATION OF EARS.
36 unchanged	25 unchanged or worse. 11 improved (2 after radical).
12 improved	6 healed or improved (2 after radical). 6 unchanged.
18 worse	16 unchanged or worse. 2 improved.
66	

In addition to these 11 cases of definite optic neuritis, there were at the first examination 39 showing vascular changes in the fundus, not actually amounting to well-marked optic neuritis, but of such a pronounced character that they could not be regarded as normal, even when due consideration was given to possible extraneous causes, such as age, occupation, error of refraction, and straining of the eyes. There remained 64 cases in which both fundi were unquestionably normal, and a number of doubtful cases, 46 in all, in which the changes were slight or could probably be accounted for by other conditions.

In Table VIII a comparison is made between the progress of the ear condition in 32 cases which showed the most marked vascular changes in the retinae, and 33 in which the fundus was normal. The striking fact is brought out that in cases of purulent middle-ear disease, in which the fundus is normal, the prospects of recovery without operation are four times greater than when

distinct evidences of vascular engorgement of the fundus are present.

The relationship between the progress of the eye and of the ear conditions is brought out in Table IX, which contains 66 cases, examined more than once, showing evidences of vascular engorgement at the first examination. It will be seen that there has been proportionately a much greater improvement in the aural condition (50 per cent.) in those cases in which the eyes have shown a corresponding change for the better than in those in which the vascular engorgement has become still more marked; in these last only 11.2 per cent. showed improvement. This fact is of distinct prognostic value, showing that with improvement in the condition of the fundus a favourable termination to the aural disease may be more hopefully looked for than when the eye condition remains *in statu quo* or becomes worse.

In 125 of the 160 cases one ear only was affected. In 21 of these the evidences of vascular engorgement were confined to or more marked in one eye; in 14 to the eye of the affected side, and in 7 to the eye of the unaffected side. In all the other cases—104 in number—the ocular condition was equally marked in both eyes, or the fundi were normal. It may thus be said, without, however, attaching too much importance to the point, that there is a greater tendency for the eye on the same side as the ear affection to show vascular changes. The following illustrative case may be cited:

A girl aged 13 had discharge from the *left* ear for eight months following pneumonia and from the *right* ear for three weeks; there were also frequent headaches. In the *left* ear was a large perforation, involving the lower half of the membrane, and in the *right* a small central perforation with scanty discharge. Both eyes were emmetropic, and a slight degree of optic neuritis was found in both, but more marked in the *left*. Four months later the right ear (the side on which the retina was least affected) was found dry, while the left ear (the side on which the optic neuritis was most marked) showed no improvement. The optic neuritis in the left eye had become distinctly more marked, while in the right the change, though slight, was in the direction of improvement.

Friedenberg,[2] in an interesting and instructive article, speaks of the value of ocular changes confined to or more marked in one eye, in the following sentence: "The more pronounced development on one side of the optic nerve involvement generally has no special meaning; in sinus thrombosis, however, value may be attached to it." In the course of his article Friedenberg quotes a case of sigmoid sinus thrombosis reported by Grüning in which, after the mastoid cells had been opened and the sinus exposed on both sides, there were no external indications to show on which side the sinus was affected. In both eyes there was vascular engorgement, which in the left, however, rapidly progressed to definite optic neuritis. For this reason alone the *left* sinus was opened and the *left* internal jugular vein resected, when a septic thrombus was discovered and removed; complete recovery followed.

The type of optic neuritis met with in this investigation has been usually mild; in 4 cases it was pronounced, and to them the term "choked disc" could be applied. The vision, however, in so far as could be ascertained, has remained unaffected and there has been no true secondary atrophy. In regard to this last point we wish to emphasize the fact that the optic neuritis associated with pyogenic intracranial lesions of otitic origin need not be followed by atrophy and blindness, differing in this very important respect from the optic neuritis found in connexion with tumours of the brain. Sir Victor Horsley[3] says in regard to optic neuritis resulting from intracranial disease:

Therefore it is now possible . . . to say that in no case of optic neuritis (not of course of toxaemic or anaemic origin) should the process be allowed to continue after it has once been diagnosed, and that if blindness results therefrom the responsibility is very heavy on any one who fails to advise such a simple proceeding as opening the dura mater.

Two cases of otitic perisinus abscess with paralysis of the sixth cranial nerve and double optic neuritis (choked disc) reported by one of us[4] (J. S. B.) demonstrate that optic atrophy does not necessarily follow optic neuritis of otitic origin, even when the dura mater is not opened. Dr. Rowan, who repeatedly examined these two cases when in the acute stage, again examined them on March 25th, 1909, three years and one and a half years respectively after the disappearance of the neuritis. In each case the vision was normal (⅔ J. 1), as were also the visual and colour fields, as tested by perimeter. In neither case was the dura mater incised. In the light of these and other cases it seems to us that Sir Victor Horsley's dictum might require some modification, or, at any rate, further investigation.

The Causation of Optic Neuritis in Connexion with Purulent Ear Disease.

In discussing the question of how these changes in the fundus of the eye are brought about, the great difficulty is the absence of pathological evidence based upon *post-mortem* examinations. In gross inflammatory intracranial lesions, such as lepto-meningitis, brain abscesses, etc., where information from *post-mortem* examinations is obtainable, the most generally accepted view is that increased intracranial pressure plays an important part in the causation of the accompanying optic neuritis. May not intracranial pressure be responsible also for those vascular changes in the eyes in certain cases of apparently simple temporal bone suppuration?

We know that serous meningitis is a not uncommon complication of purulent middle-ear disease. This form of meningitis, when present in a marked degree, may simulate, as regards symptoms, either purulent lepto-meningitis or brain abscess, but it is well known to present more frequently than either of these definite vascular changes in the fundus amounting in most instances to optic neuritis. In fact, judging from published reports of undoubted cases of this affection, optic neuritis is present in a very large majority. This is recognized by such an eminent authority as Jansen.[5] We think we have good grounds for believing that milder forms of serous meningitis occur much more frequently during the course of a chronic middle-ear suppuration than has hitherto been supposed.

We have been impressed, on questioning patients closely, with the frequency of symptoms pointing to the probability of meningeal attacks, such as frequent bouts of headache accompanied in some with nausea, vomiting, or giddiness, and in others with elevated temperature. In over 50 per cent. of our cases headache was complained of. Several of our patients were compelled to lie in bed for a week or even longer during these attacks, and we have also been informed by several parents that their children have been repeatedly sent home from school on account of severe headache and sickness. It may be postulated that in a patient suffering from purulent ear disease these symptoms coming on periodically are highly suggestive of meningeal irritation, probably of the nature of mild serous meningitis.

It is difficult to explain how comparatively mild attacks of serous meningitis may bring about vascular changes in the fundus of the eye. It is probable, however, that localization has, as in other intracranial lesions, an important bearing on the causation of these changes. In marked serous meningitis with very pronounced symptoms the fluid, large in amount and under considerable pressure, is widely distributed over the base of the brain. On the other hand, in the mild type of which we are speaking, it is reasonable to suppose that the serous effusion is more localized; constituting, we may say, abortive attacks cut short for some reason before becoming widely spread. For example, the effusion may take place in those well-known spaces, the subarachnoid cisterns at the base of the brain, and one or other of them may become a reservoir in which the effused fluid collects.

Supposing the anterior cisterna, or even its anterior half where lie the optic chiasma and the commencements of the optic nerves, carrying with them their vaginal sheaths, be the region in which the excess of fluid collects, vascular changes in the fundus amounting even to well-marked optic neuritis may reasonably be supposed to result. No doubt every one is familiar with cases of fatal lepto-meningitis in which the condition has been mainly limited to the anterior cisterna. While believing that pressure exercised in this way has probably a great deal to do with the causation of the type of optic neuritis under consideration, there are at least two modifying influences at work: (1) there may in some individuals be conditions, anatomical or constitutional, specially favourable or otherwise to the onset of optic neuritis—in a word, idiosyncrasy; and (2) the chemical character of the fluid exercising pressure upon such delicate structures as the optic nerves is of importance. In serous meningitis the fluid, while no doubt sterile in so far as pus-forming organisms are concerned, is presumably not free from their toxic products. A very

limited amount of pressure, therefore, may be quite sufficient in some individuals to excite changes in the optic nerves, when the evil effect of the pressure is enhanced by the chemical irritation of the toxins.

We venture to suggest that in many cases of purulent thrombosis of the large sinuses, and in at least a certain proportion of the cases of brain abscess, optic neuritis, when present, is caused by serous meningitis, either accompanying or immediately preceding these grave complications of purulent ear disease.

CONCLUSIONS.

Briefly stated, the following are the conclusions arrived at as the result of this investigation:

1. Optic neuritis may occur in cases of purulent middle-ear disease without obvious signs of an intracranial complication (11 times in 160 cases, or 6·8 per cent.).

2. Apart from optic neuritis, vascular changes of a lesser degree are frequent (39 times in 160 cases, or about 25 per cent.).

3. Cases of purulent middle-ear disease, in which optic neuritis or vascular engorgement of the fundus is present, are much less amenable to local treatment than those in which the fundus is normal.

4. As a general rule, an improvement in the eye condition is accompanied by improvement in the aural condition, while an increase in the intensity of the changes in the fundus or their persistence is associated with less amenability to treatment and greater gravity of the ear condition.

5. The most probable cause of vascular engorgement of the fundus or optic neuritis is serous meningitis (diffuse or localized).

6. Optic neuritis caused in this way is not usually followed by atrophy, and unless there are other symptoms demanding it, opening of the dura mater is unnecessary.

The practical lessons deducible from these are (1) that a case showing these changes in the fundus should be closely watched, and their existence regarded as an additional reason for the early performance of the radical mastoid operation; (2) if, on the other hand, they show a tendency to clear off, especially with improvement in the ear condition, or if the fundus is normal to begin with and remains so, we may with more confidence look for a favourable response to conservative treatment.

Finally, we again plead for a more systematic general use of the ophthalmoscope in cases of purulent disease of the middle ear, as we are convinced that the trouble involved will be more than repaid by the results, both as regards the progress and prognosis of this disease.

NOTE.—Since writing this we have had the opportunity of reading a most interesting paper[6] on experimentally-induced choked disc, by Drs. Harvey Cushing and James Bordley. From an experimental standpoint these two observers come to conclusions very similar to our own, and we quote them here in full:

1. That the occurrence of neuro-retinal oedema is primarily dependent on the passage of cerebro-spinal fluid under tension from the subarachnoid space of the interpeduncular region (anterior cisterna) into the vaginal sheath of the optic nerve, and that cerebral decompression often allows the process to subside, owing to a resultant diminution of tension from release of the confined fluid.

2. That the experimental work corroborates many of the more recent clinical observations in showing that a choked disc, even of considerable height, may be rapid in its formation and, provided it has not gone on to the stage of new tissue formation, may rapidly subside, and thus speaks strongly in favour of a mechanical as opposed to a chemical or inflammatory origin for the lesion.

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THE Association of German Scientists and Medical Practitioners will hold its eighty-second meeting at Königsberg this year from September 18th to 24th. Among the addresses of medical interest to be delivered in full session are the following: Dr. Cramer, of Göttingen, "Puberty and the School"; and Professor von Monakoff, of Zurich, "Localization of the Functions of the Brain." The combined medical sections will hold eighteen sittings. Communications should be addressed to the Managing Committee, Drummstrasse 25–29, Königsberg, Prussia.

A SHORT NOTE ON THE SCOPOLAMINE-MORPHINE NARCOSIS.

BY R. HILLHOUSE JAMIESON, M.B., F.R.C.S.EDIN.,

FREELAND BARBOUR SCHOLAR, UNIVERSITY OF EDINBURGH.

(From the Pharmacological Laboratory, University of Edinburgh.)

IN the course of some pharmacological experiments with scopolamine and morphine I found in animals certain effects produced on the respiration similar to those which sometimes attend the clinical use of scopolamine and morphine as an anaesthetic.

The experiments were made on cats, the blood pressure and respiratory movements being recorded in the usual way.

The preparation used was the tablet form of hyoscine hydrobromide (gr. $\frac{1}{100}$) and morphine sulphate (gr. $\frac{1}{4}$), prepared by Duncan, Flockhart and Co., Edinburgh. This dose was calculated as being that for an adult of 70 kg., giving a dose per kilogram of body weight of hyoscine gr. $\frac{1}{7000}$, morphine gr. $\frac{1}{1750}$. Accurate dosage was attained by dissolving one tablet in a definite quantity of Ringer's solution, and using intravenously such proportion of the solution as was required.

Fig. 1 (cat 2,850 grams) shows the normal respiratory

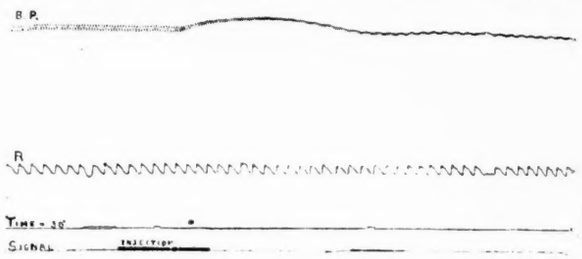

Fig. 1.

and circulatory movements, and the effects thereon of a normal therapeutic dose of hyoscine and morphine intravenously. There is no immediate effect on the respiration rate, but ten minutes later, as shown in Fig. 2,

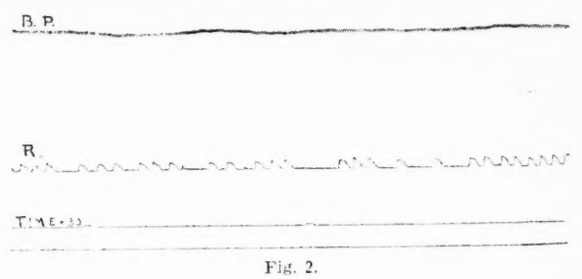

Fig. 2.

the respiratory rate has been reduced from 34 to 20 a minute.

Fig. 3 shows the effect of a second intravenous injection,

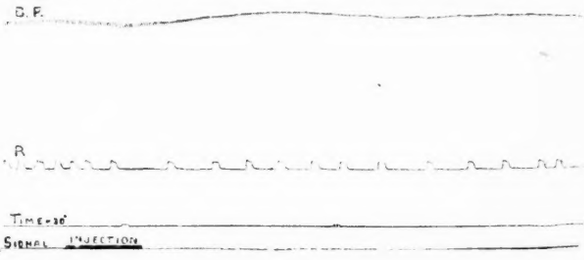

Fig. 3.

given thirty minutes after the first, the dose of hyoscine and morphine being this time equal to only half the previous dose. Yet one notices the immediate reduction in the respiratory-rate of from 26 to 14 a minute, and later to 10 a minute, as shown in Fig. 4, taken three minutes later. Thirty minutes later, when the animal was killed, the respiration-rate was 16 a minute.

In the next experiment a cat of 3,900 grams was taken, and to it was given thrice the normal therapeutic dose

ntravenously, tracings of the blood pressure and respirations again being taken. Fig. 5 shows the immediate cessation of respiration and the transient rise of blood pressure followed by the marked fall. Artificial respira.

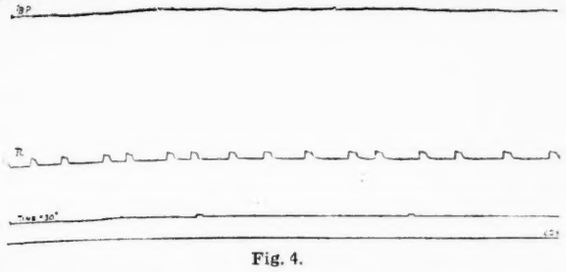

Fig. 4.

tion (20 a minute) was used, and slowly the blood pressure rose again, only to slowly fall whenever artificial respiration was discontinued, as is well shown in Fig. 6. The animal was kept alive by artificial re-

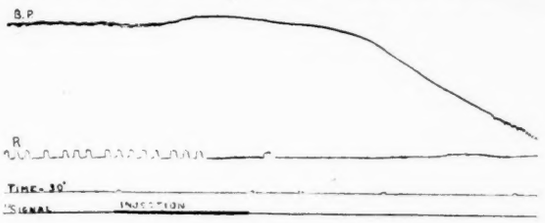

Fig. 5.

spiration till in Fig. 7, one hour later, natural respiration had started—slow and shallow, but gradually increasing in rate and in depth till the animal was killed two hours after the initial injection.

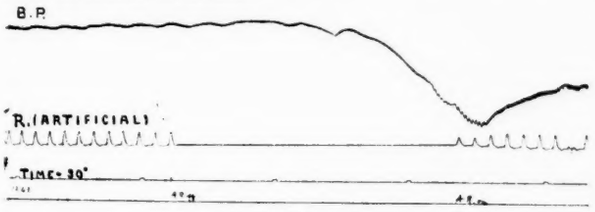

Fig. 6.

Clinically one meets with those apparently alarming cases in which the respiration-rate is greatly reduced to 5 or 6 a minute, and Figs. 3 and 4 demonstrate this clinical point in animals. Fig. 5 shows clearly where the

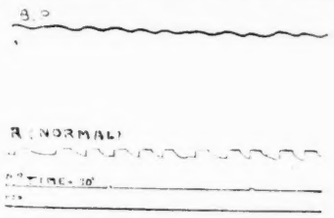

Fig. 7.

danger of the scopolamine and morphine narcosis lies, and equally clearly, in Figs. 6 and 7, is shown the clinical importance of artificial respiration in cases of an overdose of scopolamine and morphine; and this artificial respiration, combined with drugs which stimulate the respiratory centre, such as strychnine, seems to offer the most logical method of treatment in cases of an overdose.

AT a meeting of the American Health League recently held at New York a resolution was passed urging that measures should be introduced in Congress providing for the establishment of a national bureau of public health.

A COMMITTEE has been formed, among the members of which we note such well-known names as Professors Bouchard, Dastre, Simon Duplay, Laveran, F. Raymond, and Drs. Lermoyez, Moure, and Depierris, General Secretary of the French Society of Oto-rhino-laryngology, and Veillard, General Secretary of the Society of the same name, for the purpose of celebrating the jubilee of M. Gellé *père*. A medal will be struck in his honour.

DEATH UNDER SPINAL ANAESTHESIA BY JONNESCO'S METHOD IN A CASE OF ACUTE INTESTINAL OBSTRUCTION.

BY F. VICTOR MILWARD, M.B., F.R.C.S.,
ASSISTANT SURGEON, GENERAL HOSPITAL, BIRMINGHAM.

AT a time when trial is being given in this country to Jonnesco's method of spinal anaesthesia, it would seem advisable that all fatalities should be reported. The following case has occurred in my practice at the General Hospital, Birmingham.

On the evening of January 24th, 1910, a man aged 50 was admitted suffering from intestinal obstruction. He was of moderate build, and had not complained of any symptoms of disease until eight days before admission. Since that time obstruction had been complete, and vomiting had set in and had been persistent. On admission he was found to be much distended, and vomiting of a faecal and regurgitant nature was occurring at intervals of a few minutes. His pulse was 108, and of fair strength. The type of vomiting suggested special dangers for a general anaesthetic, and having recently used Jonnesco's dorsi-lumbar method with marked success in an exactly similar case, I determined to use it again.

The patient was therefore brought into the theatre, and the usual preparations having been made, an injection of 10 cg. of stovaine and 1 mg. of strychnine in 1 c.cm. of water was made in the dorsi-lumbar region. On account of the patient's condition and abdominal distension, it was not possible to employ the sitting position and forward arching of the back to any advantage, and it was only after three attempts that the introduction of the needle was successfully accomplished.

The subsequent sequence of events was as follows:

January 25th, 1 a.m.—Spinal injection of stovaine and strychnine given in dorsi-lumbar region, the patient being on the right side, with the head raised on a thick pillow. After the injection the patient was immediately turned on his back, the pillow being left under the head.

1.6 a.m.—The patient, who had been moaning, began to look ill compared with his previous appearance.

1.7 a.m.—Pupils dilating, and commencing failure of the pulse. The patient now looked very ill, and vomited liquid faeculent matter. Inj. aetheris ʒss into thigh. Inj. strych. ♏10 subcute.

1.10 a.m.—The patient quite unconscious. Giving forth gasping respiration, and vomiting large quantities of the most offensive matter, exactly resembling faeces, without effort.

1.11 a.m.—Respirations very shallow, and dying away. On account of the vomiting, the head, which until now had been raised, was lowered, and artificial respiration was resorted to. The continual stream of vomit seemed, however, to render this proceeding useless. The fauces were repeatedly mopped out, and the tongue drawn forward. Two syringefuls of ether and more strychnine were injected, and hot and cold water alternately applied to the chest.

1.12 a.m.—The pulse was now imperceptible, and all natural efforts of respiration had ceased. The conjunctival reflex was still present, and the pupils were contracted. Inj. adrenalin ♏20 (1 in 1,000).

1.15.—The conjunctival reflex now lost, and the pupils in midway position and fixed. Vomit still continued to pour from the mouth, suggestive of the fact that the gastric sphincters were relaxed. Various means of resuscitation still continued, but the patient had apparently ceased to live.

The artificial respiration was continued for one hour after all signs of life had ceased, and no operative measure was undertaken for the relief of the obstruction.

Necropsy.

A *post-mortem* examination held at the General Hospital on January 26th, 1910, showed the following appearances.

Externally, the body was that of a well-developed man. There was a slight distension of the abdominal parietes, and in the dorsi-lumbar region a considerable swelling caused by a subcutaneous haematoma. This was to be accounted for by the needle puncture and by hypostatic congestion.

Internally, the *heart* muscle was firm. The left ventricle slightly hypertrophied and dilated; the right ventricle slightly dilated. There was fibrosis of the musculi papillares in the left ventricle, but none of the valves were thickened or in any way diseased.

Both *lungs* were congested and dark in colour, and in both lower lobes were small areas of commencing broncho-pneumonia. Oedema and emphysema of both lungs was also present.

The *trachea* contained some dark greenish mucoid material resembling the vomit, but not sufficient to have caused asphyxia.

Both visceral and parietal layers of the *peritoneum* were scattered all over with small grey nodules of malignant growth. They were thickest in the pelvic region, and at the mesenteric attachments of the gut. The sigmoid flexure was severely kinked by the attachment of a nodule of growth in the omentum to an epiploic appendix. A little free fluid was present.

The *stomach* contained foul dark brownish-green fluid, which had also stained the oesophagus.

The *small intestine* was distended throughout with the same material as in the stomach. At the *ileo-caecal valve* the lumen of the intestine was completely closed by a growth which had apparently originated in or near the submucous layer and had grown towards the lumen without ulcerating the lining membrane. This was the seat of obstruction, for beyond this point the gut was empty and collapsed. In all probability here was the primary growth.

The *liver* contained a few nodules of growth on the surface and in its substance.

The *kidneys* were slightly fibrosed.

The remaining abdominal viscera presented nothing of interest.

The *spinal cord*. The theca was found to have been punctured between the eleventh and twelfth dorsal vertebrae. There was a puncture in the membranes over the lumbar enlargement at this point, and the blood vessels were engorged over the surface of the cord. No haemorrhage was observed, either outside or inside the spinal theca, except that which had already been seen outside the bony canal in the muscles and subcutaneous tissues of the back.

The external appearance of the *spinal cord* and of the *brain* were perfectly normal, and no injury was observable in the cord itself. It did not appear to have been touched by the needle, and macroscopically its structure was normal.

There can be no doubt that this man's death was directly due to the toxic effects of an intraspinal injection of stovaine and strychnine. Shock caused by traumatism is negatived by the absence of any definite injury to the cord or its membranes, but the sudden and fatal onset of cardiac and respiratory failure was exactly what might be expected of a reagent producing the same changes in the medullary region, as was purposed to be produced in the lower dorsal segments of the cord. Prior to the injection the patient was in the usual bad condition of a man with advanced intestinal obstruction, but except for his vomiting, I should not have hesitated to submit him to a general anaesthetic. As far as his heart and lungs were concerned, a general anaesthetic was by no means contraindicated, though his extreme distension undoubtedly made his chances of ultimate recovery very doubtful.

After the injection had been made, and when I was about to test the skin for anaesthesia, I noticed the unmistakable signs of profound collapse passing over his face, and the events which so speedily led to his death then ensued. Jonnesco advises that the patient be sat up with the spinal column bent forward to admit of the easy introduction of the needle.

This was not possible in the present case, and in view of his statement that a second injection can be given—necessarily in the recumbent position—to prolong the anaesthesia, I did not hesitate to give it in this position. As long as the head is raised there should, I think, be no more danger in so doing than in giving a cervico-dorsal injection.

My previous experience of the dorso-lumbar method in a case of acute obstruction was so satisfactory as to encourage me to think that the perfect anaesthetic in these difficult cases had been found. In this case the absolute analgesia of the whole abdomen, its complete relaxation, together with the entire absence of peristalsis and inclination of the distended bowels to press through the wound—in other words, the abdominal calm—were a new and most satisfactory experience of abdominal surgery. It seems strange that two such similar cases should end so differently—that in the one the higher centres should exhibit such profound toxaemia, while in the other they should be in no way affected.

In his paper on this subject, recently published in the JOURNAL (1909, vol. ii, p. 1396), Jonnesco has extolled the wonderful safety to be procured by combining strychnine with the anaesthetic reagent in the intraspinal method of anaesthesia. In this particular case I do not wish to acquit myself entirely of responsibility in the matter of dosage; for, although Jonnesco utters no *grave* warning against full doses, he does advise that the amount of 10 cg. shall be reduced in cases of severe illness. At the same time, such was the acuteness and rapidity of onset of the toxic symptoms that a much smaller dose (5 cg.) would, I believe, have been attended with great danger, even if nothing worse had happened. It may be that this patient exhibited an idiosyncrasy, but, in view of the serious results that have come to my notice in certain other cases, I shall hesitate in the future before injecting into the dorsi-lumbar region, even of a healthy adult, a larger amount of stovaine than 5 cg.

HAEMOPNEUMOTHORAX WITHOUT TRAUMATISM: RECOVERY.

BY

R. BARCLAY NESS, M.A., M.B.,
ASSISTANT PHYSICIAN, WESTERN INFIRMARY, AND PHYSICIAN TO THE ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.

and GEORGE A. ALLAN, M.B.,
CLINICAL ASSISTANT AND EXTRA DISPENSARY PHYSICIAN, WESTERN INFIRMARY, AND LECTURER ON MEDICINE, WESTERN MEDICAL SCHOOL, GLASGOW.

CASES of haemopneumothorax are sufficiently uncommon to be worthy of note; while excluding those due to injury, the condition is extremely rare. We have only been able to find records of two cases at all resembling the present one and both were fatal.

This patient was first seen on September 8th, 1909, in consultation with Dr. Hamilton Campbell (Partick), when signs of hydropneumothorax were present, and on performing paracentesis about 5 oz. of fluid, evidently blood mixed with serum, but no pus, were withdrawn. He was admitted the same day to the Western Infirmary.

History.

He was a clerk aged 31 years. On rising from his bed on the morning of August 27th, when on holiday, he experienced some pain and a sense of tightness in the left side of the chest and in the region of the stomach, and was rather breathless. He had lain without a nightshirt in a damp bed, and to that cause attributed his illness. In spite of his condition he was able to travel home, a distance of some ninety miles, and commenced work on August 30th. On September 3rd, when walking to his work, he had a similar but more severe attack of pain in the left chest and shoulder. He felt faint, but managed to get home by tram and went to bed, where he remained till removed to hospital.

Condition on Admission.

He had marked signs of hydropneumothorax. The left side of the chest was bulging and did not move with respiration. When lying flat on his back a tympanitic note was obtained on percussion over the whole left front of the thorax, and also on the right side to a line drawn from the suprasternal notch to a point 1½ in. to the right of the mid-sternum at the level of the fourth cartilage. The respiratory murmur, vocal resonance, and fremitus were diminished over all this area. When the patient was sitting up there was an area of dullness below the level of the fourth rib on the left side, extending down to the costal margin. Behind, dullness reached to the level of the seventh dorsal spine, and this level rose as the patient reclined. Above this a tympanitic note was obtained, with absence of respiratory murmur and vocal fremitus and deficient vocal resonance. In addition to the tympanicity and movable dullness, splashing sounds on succussion and the coin sound were typically present, but there was no metallic tinkling. The only area of cardiac pulsation was on the right side in the fourth space, with its centre about 3 in. from the middle line. A small area of relative dullness was also made out in this region, extending from the upper border of the fourth rib to the fifth rib, and transversely from 1½ to 3½ in. to the right of the mid-sternum. The heart's sounds were well heard in this area, free from murmur; they were quite inaudible in the normal apical region, and only indistinctly heard toward the upper part of the sternum. The pulse was 108, regular, small, and weak. The liver was displaced downwards, relatively more on the left side, as were also the stomach and spleen. The temperature at first was of an irregularly remittent type, ranging from 98° to 101° F.

Course of the Disease.

Improvement was steady; by September 13th the area of cardiac dullness was more definite, and almost reached the middle line, while the liver had risen a little.

On October 2nd, cardiac pulsation was seen in the fifth left interspace 2¾ in. from the mid-sternum. The absolute liver dullness reached the sixth rib in the right mid-clavicular line. The signs of hydropneumothorax were, however, still present. On October 16th the heart was beating in its normal situation, and although splashing could occasionally be heard, no other definite signs of pneumothorax persisted. On October 20th, six weeks after admission, all signs of pneumothorax had disappeared, and he was allowed to go home.

He reported himself on November 4th, and with the exception of slight diminution of movement and respiratory murmur at the left base, the signs had cleared up, and no evidence of intrapulmonary mischief could be detected. He expressed himself as feeling very well. Three months later he still looked quite fit and is regularly at his work.

The treatment was symptomatic, and no further attempt was made to remove the fluid.

It is difficult, if not impossible, to determine the cause of the condition. There was certainly no injury. He was not of a specially robust appearance, and thought he might have lost flesh during the past year, but was always able for his work, and had often to work late. He had a slight cough, and when in hospital his expectoration, which was not at any time copious, was examined for tubercle bacilli, but always with a negative result. Von Pirquet's test for

tubercle gave a slight positive result. During the first week his temperature ranged from 98° to 101° F., but for the last five weeks it was rarely above normal; the pulse was about 80 and the respirations 20 to 30.

Two points are of interest in the present case and demand an explanation, first, the occurrence of pneumothorax in a patient without obvious cause, and, secondly, the presence of blood along with the pneumothorax apart from injury.

Of all causes of pneumothorax, phthisis is, of course, much the commonest; of 918 cases compiled by Biach[1] from thirty-eight years' records of three Vienna hospitals it was the cause in 715, or 77.8 per cent. Gangrene, empyema, injury, bronchiectasis, and emphysema came next in order, while 14, or 1.5 per cent., are noted as due to uncertain causes. Hall[2] in 1887 collected 31 cases of pneumothorax occurring in the apparently healthy, including 21 previously noted by West; he found a strain of some kind to be the chief exciting cause, and that even if serous effusion followed, recovery in from five to six weeks was the rule. Haemothorax (that is, effusion of blood and not simply blood-stained fluid), on the other hand, is usually due to trauma or rupture of thoracic aneurysm, while tubercle and malignant disease figure as other possible causes.

Finlay[3] states that, apart from injury, haemopneumothorax is extremely rare, and that the cause is altogether obscure. He refers to two cases which may be briefly noted.

Pitt[4] in 1900 made a communication to the Clinical Society of London "on a rapidly fatal case of haemopneumothorax apparently due to rupture of an emphysematous bulla." The patient was a youth, aged 18 years, who was attacked with pain when taking a walk and died next day. At the autopsy the pleural cavity was found to contain 8 pints of fluid blood and clot enough to fill the hands three times. Near the apex of the lung a ruptured emphysematous bulla was found, quite sufficient to account for the air, but no evident cause for the blood could be found, unless it came from an adhesion which extended from the bulla to the pleura, and which had been torn across. No aneurysmal dilatation or patent vessel could, however, be seen. There was no trace of tubercle, either recent or old. At that time he examined the records, and could find no definite case of haemopneumothorax, apart from injury, save one case in the *Guy's Hospital Reports*, due to rupture of an aneurysm in a large phthisical cavity. He remarks, incidentally, on the rapidity with which the pleura can deal with effused blood, and also on its power of keeping the blood fluid, though not necessarily unaltered, especially in non-traumatic cases.

It is to be noted in this connexion that the fluid drawn off from this patient showed no tendency to clot, though it was kept for many days.

Shortly afterwards Rolleston[5] reported to the same society "a case of fatal haemopneumothorax of unexplained origin" occurring in a youth aged 21, who died in six days. There had been no injury and no previous pulmonary symptoms. At the autopsy 60 oz. of fluid blood and a few ounces of clot were present in the pleural cavity, but no cause for either the blood or air could be found, although careful search was made. The possibility of the blood being due to some haemophilic condition was considered, although there were no grounds for the assumption, and the question was even raised whether the air might not have been derived from the blood by irregular respiratory movements causing a negative intrapleural pressure. The etiology, however, remained quite unexplained.

We have been unable to trace any case at all comparable occurring since these two, and while both of those were examined *post mortem*, the findings do not warrant us in arriving at any definite conclusion as to the causation of the case now reported, and one gets little or no guide from the ordinary conditions accepted as causes of pneumothorax. It must therefore be classified for the present as a case of haemopneumothorax of unexplained origin occurring in the apparently healthy.

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A CASE OF ACUTE TUBERCULOUS BRONCHO-PNEUMONIA AFTER GASTRO-ENTEROSTOMY.

BY

W. A. MACKAY, M.D.Ed., F.R.C.S.E., CONSULTING SURGEON TO THE RIO TINTO CO., HUELVA, SPAIN,

IAN MACDONALD, M.D.Ed., M.D.Paris, CONSULTING SURGEON TO THE UNITED ALKALI AND PENA COS., HUELVA, SPAIN,

AND

HALLIDAY G. SUTHERLAND, M.D.Ed., MEDICAL SUPERINTENDENT, THE WESTMORLAND SANATORIUM.

THE pulmonary complications after gastro-enterostomy are practically the only immediate dangers to be feared since the disappearance of the vicious circle, and their cause is as yet uncertain, but it seems to be generally admitted that they are most frequent after operations on the gastro-intestinal tract. By careful disinfection of the mouth for some days prior to operation, by avoidance of chill during the preparation of the patient, by the minimum exposure of the viscera, and by the adoption of the elevated position whenever the effects of the anaesthetic have worn off, much can be done to shield the patient from the onset of pulmonary complications.

In a first series of 80 gastro-enterostomies, including cancer cases, we have lost 2 patients—one from vicious circle, the other, a man of 60, from pneumonia. The following case is of interest from the specific variety of broncho-pneumonia which supervened, causing the death of the patient six months later.

A farm labourer, aged 39, complained of chronic indigestion, attended by severe epigastric pain without vomiting, usually most severe in the early hours of the morning.

HISTORY.

The condition had existed for fourteen years, and during the last year the patient had lost weight, and the nocturnal pain was at times so acute that he would pass the night rolling about doubled up in bed. Towards morning the pain became easier, and almost disappeared when he rose at 7 a.m. At 8 a.m. he was accustomed to take a cup of coffee, and an hour later the pain would return more or less continuously until mid-day, when he ate again and felt relieved, only to suffer another attack at 3 or 4 p.m. His next meal was at 6 p.m., after which he immediately felt better, but at midnight the onset of pain would awaken him. He had been in the habit of taking a herb tea in the night which gave relief, and occasionally sodium bicarbonate. The pain was situated in the median line in the epigastrium, and radiated round both sides of the thorax and through to the back. He had no vomiting, unless voluntarily induced, which he did from time to time to empty the stomach and so ease the pain, but he had constant eructations, and an acid taste in his mouth. He would pass three or four days without a motion, and said that on two or three occasions he had passed black motions. He was always worse in cold weather, and had become totally incapacitated for work. A diagnosis of duodenal ulcer was made, and confirmed by a test meal, which showed no stasis but considerable hyperacidity.

OPERATION.

He was admitted to the Clinque Mackay, Huelva, Spain, on January 17th, 1908. The chest was carefully examined and found to show no abnormality, nor was there any history of any chest trouble; the morning and evening temperatures were normal, and the heart and kidneys were sound. Careful disinfection of the mouth was carried out up to the day of operation. On the day before operation the patient was in great pain, and vomited some of the milk on which he was fed for twenty-four hours before operation.

On January 22nd, after five days' observation, the abdomen was opened above and to the right of the umbilicus by pulling the right rectus outwards. On inspection of the pylorus nothing abnormal was seen, but about 1 in. beyond the pyloric venous plexus on the upper surface of the duodenum an irregularly rounded ulcer, the size of a sixpence, with a hard, indurated base, was easily demonstrated to the onlookers. Posterior gastro-enterostomy, with clamps and suture, was performed and the patient put back to bed in good condition.

ACUTE TUBERCULOUS BRONCHO-PNEUMONIA.

(Remarks by Dr. Sutherland.)

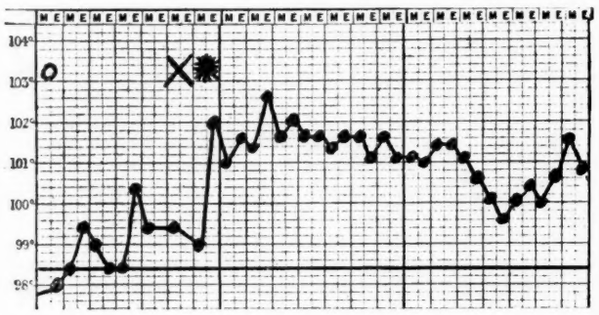
During the first five days following the operation the patient's general condition was good, although he had slight cough and sputum which was attributed to the chloroform. Examination of the chest on the fifth day disclosed neither alterations in the breath sounds nor accompaniments, while the temperature during this period only showed the usual post-operative rise.

The sixth day, however, marked the onset of acute tuberculous broncho-pneumonia. The evening temperature made a sudden rise from 99° F. to 102° F., while auscultation revealed the general signs of bronchitis, which altered at the end of the week to those of broncho-pneumonia; that is to say, the rhonchi

disappeared and the breath sounds were diminished over both lungs, with the exception of the lower right lobe and the upper left lobe, where the breathing was broncho-vesicular, with moist râles on inspiration, and here and there an area of increased vocal resonance. The percussion note was slightly dulled over the left apex, where "tidal percussion" revealed diminished expansion. He was given benzoin inhalations and 6 grains of quinine thrice a day, in the hope that there might be an element of malaria in his condition. During this week he complained of profuse sweats at night and diarrhoea commenced.

During the second week he complained of sharp pain in the right side, where friction was frequent, and the breath sounds underwent further modification. The breathing was harsh and broncho-vesicular all over the chest, with copious musical rhonchi both on inspiration and expiration. Here and there over all lobes were patches, showing bronchial breathing and increased vocal resonance, while the "tidal percussion" showed no expansion at either apex or at the bases behind, where dry inspiratory clicks during inspiration were heard. The sputum contained tubercle bacilli and elastic tissue, but was not copious. After the initial rise, the temperature remained continuously high, between 101° and 102° F., with an absence of remissions. The pulse, following the temperature, showed no remissions, and during the first two weeks averaged 80, but during the third week rose to an average of 94. Respirations ranged between 22 and 24.

It is obvious that in this case we were dealing with the comparatively rare condition in the adult of acute tuberculous bronchopneumonia. Prior to the operation the patient had neither cough nor sputum, while a careful examination revealed no abnormality of the chest. Further, the patient denied the slightest sign of chest disease prior to the present illness, and the family history was good. At the same time, it is probable that he had a latent focus of infection, which only required a lowered resistance to break out into this grave form of phthisis. When we recall the fact that 90 per cent. of normal



O, Operation; X, chest examined, *nil*; ✳, onset of acute tuberculous bronchopneumonia.

persons have had, at one time or another, some focus of infection in the lungs, the etiology of the case is not obscure. In spite of the long period of disturbed nutrition consequent on the intestinal lesion, this patient presented sufficient resistance to hold the disease in check until some condition so weakened the pulmonary resistance that in two weeks the two lungs were infected in every lobe.

Since the operation of gastro-enterostomy has come to be one of the most frequent in abdominal surgery, it has been generally recognized, especially on the Continent, that the danger of the operation itself is nothing compared to the risk of post-operative pulmonary infection, which usually takes the form of bronchopneumonia. In view of the bovine and ingestion theory of tuberculous infection, there is no doubt that the long period of intestinal disease would predispose to the entrance of the tubercle bacillus into the system, but any suspicion of the duodenal ulcer being tuberculous was negatived by the clinical history of the case, the appearance of the ulcer at operation, and a negative result in examining the faeces for tubercle bacilli. The patient died in six months from this acute form of pulmonary tuberculosis. Relief from gastric symptoms was complete.

The incidence of phthisis supervening on chronic gastric or duodenal ulcer is given by different authorities at 20 to 27 per cent. of the complications of the gastric or intestinal lesion; and, in view of the fact experimentally proved that a lesion of the intestinal tract favours the absorption of tubercle bacilli into the lymphatic and circulatory systems, by either of which routes they may reach the lung, there is a clear indication for the earlier resort to surgical measures in cases of chronic ulcers which are not benefited by medical treatment.

A TYPHOID CARRIER.

BY

J. R. HUTCHINSON, M.B., D.P.H.,

ASSISTANT TO THE MEDICAL OFFICER OF HEALTH, MANCHESTER.

THE circumstances of this case are briefly as follows:

CASE I (229, 1908).

J. H. W., aged 36, commenced with enteric fever on or about September 24th, 1908. Widal's test was positive on October 19th, 1908. This patient had been living at the house in which he then was for four days. Prior to this he had lodged for some months at the house of a Mrs. W., a widow, who gets her living by taking in lodgers. She does all her own housework, and commonly has two or three lodgers.

At the same house in which J. H. W. was presumably infected, three previous cases (II, III, and IV) of enteric fever had occurred amongst Mrs. W.'s lodgers.

CASE II (130, 1907).

J. W. E., aged 19, commenced to be ill on September 7th, 1907. On September 28th he was removed to the fever hospital. His blood gave a positive reaction. He recovered.

CASE III (224, 1906).

A. A., aged 28, commenced to be ill on September 4th, 1906. His blood gave a positive reaction. Death occurred on October 16th, 1906.

CASE IV (135, 1906).

A. W., aged 28, commenced to be ill on May 2nd, 1906. His blood gave a positive reaction. Death took place on June 14th, 1906.

All these four cases were infected between May, 1906, and September, 1908, at the one house kept by Mrs. W. during this period. Three further cases were traced to two other houses at which Mrs. W. had previously taken in lodgers.

CASE V (174, 1905).

H. R., aged 19. Onset of disease, May 20th, 1905. Blood reaction positive. There is just a chance that this patient was infected outside Manchester, but this is unlikely. He had lodged at this house for three months.

CASE VI (118, 1905).

H. P., aged 25. Onset, April 8th, 1905. Blood reaction positive. A daughter of H. P.'s too had a prolonged febrile illness about this time; the details of this illness are not forthcoming; a blood specimen could not be obtained. Both father and daughter were lodgers with Mrs. W.

CASE VII (388, 1898).

W. D., aged 23. Onset, October 4th, 1898. Removed to the fever hospital, and died November 1st, 1898. For six weeks prior to October 4th W. D. had lodged with Mrs. W.

The only factor common to all these cases is the presence of Mrs. W. No history of contact with known enteric fever cases, or of consumption of food likely to be infected, was obtainable in any of these cases.

Mrs. W.'s medical history is as follows: Up to 1893, when she was about 54 years old, she enjoyed good health, and never had occasion to see a medical man. In this year she had an attack of "influenza and pneumonia," for which she was treated in a union hospital. She remembers little about this illness except that she had severe headaches and pains in the back, and was delirious. She was ill for five weeks, and was fed entirely on fluid foods. Since this illness she has suffered from periodic attacks of abdominal pain and vomiting. These attacks did not follow immediately on the illness of 1893; there was an interval of five years during which her health was good. A specimen of blood obtained in November, 1907, gave a negative reaction.

Five of the seven cases recorded above are also recorded in the annual report of the medical officer of health for Manchester for 1907. The occurrence of a sixth case in September, 1908, caused further search to be made, when a seventh was discovered so far back as 1898.

No cases can be found as having occurred at the house of Mrs. W. prior to 1898. Possibly some may have been overlooked. It was not until 1898 that Mrs. W. began to suffer from attacks of abdominal pain and vomiting after her five years of good health. The year she began to be ill was marked by the appearance of the first known case of enteric fever amongst her lodgers. There is no doubt that she was ill before her lodger.

It is curious that no further cases should come to light between 1898 and 1905; certainly none were notified during this period. It is a well-known fact that in "carrier" cases the bacilli are excreted in the stools and urine in batches with bacillus-free intervals. Many such batches must have been shed from time to time during these years. In October, 1908, Mrs. W. was examined by

the practitioner who usually attended her; he was unable to detect any abnormal physical signs—the liver was not enlarged, the gall bladder could not be felt, there was no evidence of gall stones. He had had the patient under treatment on and off for years for "indigestion and chronic constipation." So far as he knew, she had never been jaundiced.

On November 4th, 1908, Mrs. W.'s blood gave a positive reaction in thirty minutes. The same evening she was given, in accordance with Professor Delépine's method, a dose of sulphate of soda, and next morning specimens of her faeces and urine were obtained. Both contained typhoid bacilli. A month later (December 3rd) further specimens were obtained without the administration of a cathartic; on this occasion the bacilli were found by Professor Delépine in the faeces only; the urine was sterile. Attempts to obtain further specimens of blood from Mrs. W. were unsuccessful.

It seems highly probable that the influenza and pneumonia of 1893 was in reality enteric fever. It is remarkable that she is not known to have infected any one prior to 1893, particularly so as she was engaged in general housework, including the preparation of food, etc., for her lodgers. Certainly her attacks of abdominal pain, etc., do not seem to have troubled her prior to the middle of 1898.

She cannot, when her serum gave a positive reaction in November, 1908, have been infected by J. H. W., the last case to occur in her house, as not only did her excretions contain typhoid bacilli at that time, but they were present in her faeces on December 3rd, six weeks after J. H. W. had been removed to hospital.

The negative reaction obtained in November, 1907, is not of great importance, for, as Doerr[1] showed in 1905, the persistence of typhoid bacilli in the bile is unable to preserve the agglutinating properties of the blood.

It has been pointed out also by German observers that this not infrequently occurs. Forster and Kayser[2] suggest that the attacks of abdominal pain, vomiting, etc., which occur from time to time are due to local inflammatory changes in the gall bladder set up by the contained bacilli, and that with each attack more agglutinating substances develop in the blood stream. Widal's reaction, then, would probably be obtained with a specimen of blood taken soon after one of the periodic attacks of abdominal pain, etc., but with the lapse of time, and without the assistance of another attack, the serum would lose its agglutinating properties. Mrs. W. has had "stomach attacks" at intervals of a "few days" for upwards of ten years.

None of the patients returned to lodge again at Mrs. W.'s after recovery; there is no question, therefore, of any one of them being responsible for any subsequent case.

It is interesting to find that the last 6 of the 7 cases had been living at the house of Mrs. W. for four, three, two, three, three-quarters, and one and a half months respectively before they became infected. No record of the length of time that Case 1 had been here prior to infection was made. This calls to mind Kayser's famous case of the Strassburg baker.[3]

There appears to be some element of periodicity in the cases infected; this has been previously noticed by Davies and Walker Hall.[4]

For permission to publish this case I am indebted to Dr. Niven.

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[1] Doerr, *Centralbl. f. Bakt.*, 1905, v, 39. [2] Forster and Kayser, *Münch. med. Woch.*, 1905, No. 31. [3] Kayser, *Arbeit. aus dem Kais. Gesund.*, 1906, B. 24. [4] Davies and Walker Hall, BRITISH MEDICAL JOURNAL October 17th, 1908.

THE E.M.I. (oeuvre d'Enseignement Médical Complémentaire), which is under the patronage of the French Government, has this year chosen Belgium and Holland as the scenes of its tour of medical study. The tour will last from August 1st to the 20th. The party will start from Lille, returning by way of Luxemburg and Alsace, and separating at Vittel. It will visit Ostend, Middelkerke, Blankenberg, Bruges, Ghent, Brussels, Louvain, Antwerp, Rotterdam, The Hague, Leyden, Amsterdam, the Isle of Marken, Utrecht, Liége, Spa, Bourgoumont, Luxemburg, Strassburg, Munster, Schlucht, and Gerardmer. The association issues a journal entitled *L'Enseignement Médico-Mutuel International* (published at 12, rue François-Millet, Paris XVIème) in which detailed information is given.

SYPHILITIC LEUCODERMA IN A MALE.

BY

STAFF SURGEON KENNETH H. JONES, M.B.,

ROYAL NAVY.

THE following case is of interest, both because it occurred in a male—an event of considerable rarity—and because of the large area affected.

W. R., aged 21, a newly entered stoker recruit, was on April 20th, 1909, picked out of about 200 men and boys, all stripped to the waist, and awaiting their examination by a medical officer as to personal cleanliness. He stated that previously to enlistment he was employed as a fireman at works in the North of England. He admitted having contracted syphilis about three years before, and the scar of the chancre was very obvious on the glans penis, near the meatus. According to his own account, he had suffered very little from secondary symptoms, and had had no regular or continuous treatment with mercury. With this exception he had always enjoyed very good health.

He was of blonde Saxon type, with very fair hair and blue eyes, well nourished and muscular. The whole of the trunk, both anteriorly and posteriorly, to about the level of the umbilicus, as well as the upper extremities as far down as the insertions of the deltoid muscles, was affected. The skin was to some extent pigmented, and in certain regions very dark indeed; whilst over the whole there appeared whitish rounded or oval mottlings or dapplings, most obvious where the surrounding cuticle was most deeply coloured. The pigmentation was most marked in the region over the outer two-thirds of the clavicles, and more so immediately above than just below them; in the middle line, over the inner thirds of these bones and over the upper edge of the sternum, it paled very markedly. The skin over the outer two-thirds of the clavicles, and for about 1 to 1½ in. above, was a deep brown, like that of a lightly-coloured Indian; that of the rest of the neck was normal. After these areas, the darkest parts were those over the top of the shoulders and over the deltoid muscles, pigmentation being very marked as far down as the insertions of the latter. The very dark coloration did not continue round the back of the neck in the form of a collar. In all the above areas the dappling was exceedingly obvious, the whitish patches being well defined and their edges sharply cut. Over the rest of the trunk, ventrally and dorsally, the condition was well marked but the pigmentation was less, the colour being of a light yellowish-brown; the dapplings in consequence were less obvious, and showed less tendency to be sharply circumscribed. About the level of the umbilicus was a well-marked impression from the wearing of a tight belt, and below this the peculiar skin coloration was absent. The pale areas or dapplings varied from ½ to ¾ in. in diameter, and tended to become smaller as well as less well defined on the chest, sides, back, and abdomen than in the clavicular regions and over the deltoids.

After an interval of six months, when an opportunity again occurred of making observations, the condition was, on the whole, slightly less evident than before, but was still most marked just over the clavicles and deltoid muscles; the whitish dapplings showed a tendency to be less circumscribed, and the pigmented areas to decrease, both in extent and depth of coloration. The dapplings showed a tendency to run into one another, especially on the abdomen. In the region of the nipples and over the scapulae all pigmentation had disappeared, together with the characteristic whitish areas (dapplings). The mark of the belt had gone, but no pigmentation occurred below its former situation. Posteriorly on the left side the condition was most evident along the inner margin of the scapula and below it, whilst beyond the mid-axillary line, passing forward, pigmentation seemed to have cleared towards the middle line of the body. On the right side the condition was not so marked along the inner border of the scapula, but about as well marked below it as on the left; in the mid and anterior axillary lines, and towards the middle line of the body, however, it was well in evidence.

It is interesting that in so marked a case the sides of the neck, usually the parts affected, should escape altogether. It has been observed that syphilitic pigmentation usually, as in this case, clears away very slowly.

In fair Europeans, of the same type as the patient, exposure to the sun in some parts of the world, and especially accidental exposure of a portion of the skin usually protected, may produce a pigmentation as definite and as deep in colour as the syphilitic described above. Such pigmentation is frequently, but not always, preceded by an inflammatory erythema; it is very permanent, like the syphilitic, and may take eighteen months to two years to disappear, although there be no subsequent exposure to the sun.

Again, it is remarkable to what an extent scars and the cuticle round them tend to become pigmented in some moderately dark-skinned races, as, for instance, the Chinese; and also how very permanent is such pathological coloration, whether on an exposed or unexposed part of the body. Obviously, then, permanency is not peculiar to syphilitic pigmentation.

The whitish dapplings have been thought to represent degeneration following a roseolar syphilide, but in this case the man denied ever having had a secondary eruption of any kind.

The term "dappling" is taken from an excellent paper on this subject by Sir Jonathan Hutchinson in the BRITISH MEDICAL JOURNAL of January 9th, 1909, and describes the condition most admirably.

THE RELATION OF THE PAROVARIUM TO CYST FORMATION.

BY PERCIVAL P. COLE, M.B., CH.B., F.R.C.S.ENG.,
DEMONSTRATOR OF ANATOMY, BIRMINGHAM UNIVERSITY.

THE parovarium—the rudimentary structure representing the Wolffian system in the female—presents itself as a series of vertical tubules, which below disappear into the ovarian tissue, but above join a horizontal tubule, which courses parallel to, but below the Fallopian tube. At its distal extremity this horizontal tube may have two or three slightly dilated terminations known as Kobelt's tubes, whilst towards the uterus it fades away, and can no longer be traced in the broad ligament. The outermost vertical tubule is in some cases so closely related to the fimbria ovarica that the two appear to fuse.

A striking fact with regard to the parovarium is that the degree of its development varies with the age of the subject, without direct relation to the increase in size of the broad ligament. Thus, in the fetus the parovarium can with difficulty be distinguished by the naked eye. At the age of 12, although the uterus and broad ligament and all the sexual apparatus have considerably increased, the parovarium is still a structure which might easily escape notice. It is most marked from the age of 20 onwards, and the most evident examples are found in women from 40 to 53.

In this connexion it is interesting to observe the clinical fact that cysts, originating in the parovarium, practically never occur before the age of 16. A section through a Kobelt's tube which occurred as a small pedunculated cyst shows that the wall contains a definite amount of muscular tissue, which cannot, however, be differentiated into layers. The lining cells are definitely columnar, an observation which is at variance with Doran's[1] statement, that every cyst connected with the outer portion of the horizontal part of the parovarium is lined with endothelium, and not with ciliated or columnar epithelial cells found in the vertical tubes.

A similar pedunculated appendage sometimes seen in the same neighbourhood is solid and not cystic. In the midst of the fibrocellular tissue, of which the little body mostly consists, are small spaces lined by regular low columnar epithelium. These spaces are undoubtedly portions of Wolffian tubules which have escaped obliteration. Surrounding these spaces a zone of muscle—differentiated by Van Gieson's stain—may occasionally be seen. The drawing (Fig. 1) shows two cell-lined spaces, and illustrates clearly the type of epithelium.

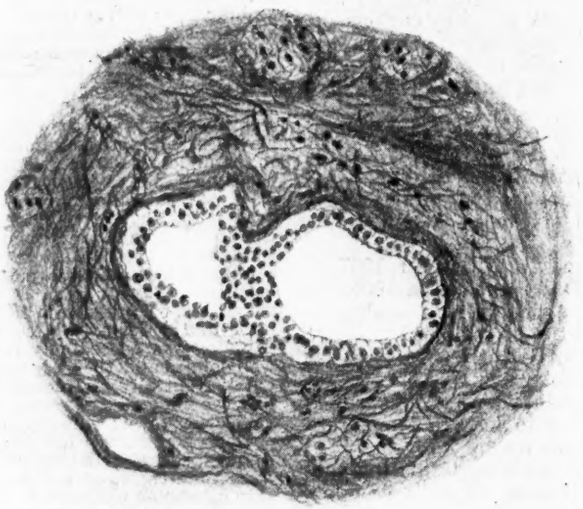

Fig. 1.—Drawing to show partial obliteration of Wolffian tubules accompanied by small cystic dilatations.

A comparison of the two bodies above described is interesting as showing in the one cystic dilatation, and in the other obliteration in progress but not complete, each isolated cell group being itself a potential cyst.

The probable course of events in the life-history of the parovarium is indicated in Fig. 1. Obliteration is probably never complete; the tubes are, to a very large extent, converted into solid cords, but here and there retain a lumen surrounded by characteristic cells.

This hypothesis has been verified by sections of isolated tubules cut transversely and longitudinally. The photomicrograph (Fig. 2) shows the appearance of a transverse section of a single isolated tubule; no trace of lumen is present. It has become a solid cord of fibrous tissue, in which are vessels. It is obvious that such a structure may easily be overlooked, even when careful search is made.

Fig. 2.—Photomicrograph showing transverse section of single isolated tubule, the lumen of which has been completely obliterated.

The photomicrograph (Fig. 3) is of a longitudinal section made through a single tubule, which presented a slight enlargement at one point. The section has exposed an irregularly shaped cavity in the wall of which some muscle can be distinguished.

The lining epithelium has become detached, but the lumen is filled with débris and cells. These cells, under a high power, resolve themselves for the most part into groups of well-preserved short columnar epithelium, the appearance of which is shown in Fig. 4. There can be no doubt that this cavity has been formed as a slight cystic dilatation in the course of a Wolffian tubule.

In these two sections (Figs. 2 and 3), taken from a woman aged 53, are seen the two stages of complete and partial obliteration. In this way it becomes possible to distinguish the potential factors concerned in the formation of cysts from the parovarium.

But opinions vary as to the frequency with which broad ligament cysts owe their origin to the parovarium. Formerly all cysts in this ligament were regarded as originating therefrom, whereas at least one observer holds that their source is Müllerian in a large proportion of cases. Meyer,[2] discussing these cysts, quotes Kossman[3] as upholding the theory of their origin from accessory Fallopian tubes. Meyer disagrees with him for two reasons: First, because of the frequency with which small appendages are found, compared with the relative rarity of accessory tubes; and, secondly, because these appendages frequently occur in that part of the meso-salpinx in which the portion of the parovarium adjacent to the fimbriated extremity of the tube is wide and thick, and where, in his experience, the parovarium sometimes ends in small cystic dilatations, most frequently observed,

according to Meyer, in the newly born. Systematic examination of broad ligaments confirms this statement, and proves, moreover, that these small appendages, which may even be tufted, are definitely connected with the parovarium.

Fig. 3.—Photomicrograph showing longitudinal section of single tubule showing slight enlargement at one point.

Kossman's theory is, therefore, not supported by the facts. That a number of broad ligament cysts do originate from the parovarium cannot be doubted, but that all broad ligament cysts do not originate from this structure is equally certain.

Sampson Handley,[2] in 1903, contended that cysts, which could be enucleated and which were situated above the tube, were of Müllerian origin. He was able to prove this contention by demonstrating a communication between the Fallopian tube and the overlying cyst in the specimen 4582, museum of the Royal College of Surgeons of England. He also demonstrated the similarity of the cyst wall to that of a hydrosalpinx, and inferred that, if such a similarity could be demonstrated in the case of a cyst lying above the tube, it was sufficient proof of its Müllerian origin, because the proved existence of a communication in one instance makes it reasonable to assume that such has been present in other similarly constituted cysts, even though at the time of examination it has become obliterated.

Accessory tubes, when present, frequently have no lumen, and, when patent, any communication with the main tube is of extreme rarity.

I am able to illustrate a specimen bearing on this point, for the use of which I am indebted to Dr. Hewetson. The parts removed were taken from a young woman on account of haemorrhage from a ruptured Graafian follicle, and consist of tube, ovary, and broad ligament (Fig. 5).

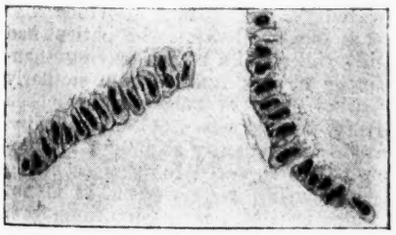

Fig. 4.—Epithelium lying in the lumen of a cystic dilatation of a parovarian tube.

The Fallopian tube measured 4.5 cm. in length, and the accessory tube 2.5 cm. in length. Air inflation was made use of to demonstrate any possible communications, the specimen being held under water. When A was inflated bubbles were seen to emerge at D, the cut end, and at E, the fimbriated end. When these orifices were compressed the bubbles escaped at C. When B was inflated, bubbles escaped at C and at the other orifice, defined in the photograph by a bristle. No bubbles escaped from the fimbriated end of the tube B.

The condition must have been similar to that shown in the diagram, the orifice C being common to the two tubes A and B. It seems probable that the original terminal orifice of the Müllerian duct was at C, corresponding to the site at which the mesothelium became invaginated at the time when the Müllerian duct commenced to develop. Sedgwick and Balfour maintain that three such invagina-

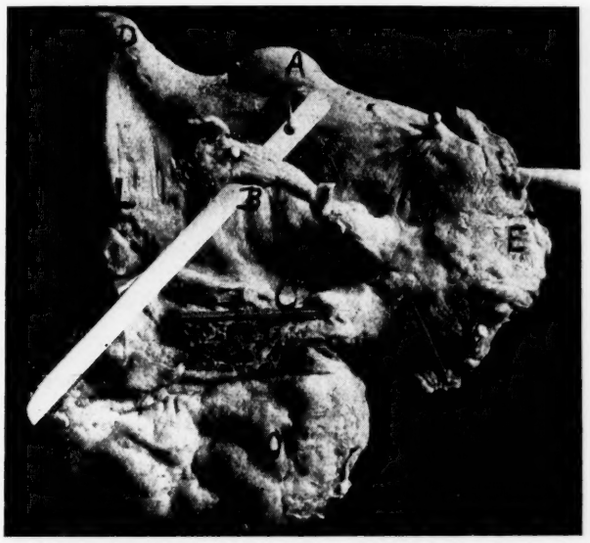

Fig. 5.—Fallopian tube, ovary, and broad ligament in a case in which haemorrhage occurred from a ruptured Graafian follicle. A, Fallopian tube; B, accessory Fallopian tube; C, point at which the air escaped when D and E were closed and when B was inflated; D, cut end; E, fimbriated end of Fallopian tube; L, cut end of broad ligament; O, ovary; S, cut surface.

tions take place. The fusion that subsequently occurs converts these three invaginations into one common orifice —the abdominal ostium.

In this case fusion may have failed, and the three invaginations be represented by the orifice C, the accessory tube B, and the fimbriated opening E. It will be noticed in this connexion that the obviously tubular structure between E and C occupies the position of the fimbria ovarica, and is the only representative of it.

Obliteration of the orifice C, together with the communication with the tube A, and subsequent dilatation of its cavity, would give rise to a cyst occupying a position in which cysts are frequently found, and give little or no clue as to its Müllerian origin. The specimen indicates clearly that, as Handley suspected, cysts below the Fallopian tube may also be Müllerian in origin.

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[1] Doran: *Observations on Tumours of the Ovary*, 1884. [2] Handley *Journal of Obstetrics and Gynaecology*, 1903. [3] Kossman: *Krankh. der Weiblichen Adnexorgane* (Martin), vol. i. [4] Meyer: Ueber epitheliale Gebilde im Myometrium des foetalen und Kindlichen Uterus.

A PETITION from the Massachusetts State Nurses' Association, asking for the establishment of a State board of registration in nursing, is now before the Massachusetts State Legislature. A similar measure has been passed by the State of New York, and has, it is stated, proved successful.

THE annual meeting of the Association of Certificated Dispensers was held at the Apothecaries' Hall, E.C., on March 10th, Mr. Montagu Smith, Lewisham Infirmary, presiding. The Treasurer, Mr. A. Z. Anderson, Whitechapel Infirmary, presented his balance sheet, which showed a balance of £56 9s. 6d. to the credit of the association. The Honorary Secretary, Mr. A. Howell, Dalston Dispensary, N.E., submitted his annual report, which showed a continual growth in the membership, the association being about 350 strong A great meeting had been held in November last, at which a resolution was passed urging the Society of Apothecaries to use its influence with the Pharmaceutical Society in reference to the making and passing of by-laws for the registration of the assistants by the powers conferred on the latter authority under Section 4 of the Poisons and Pharmacy Bill, 1908. Negotiations are still proceeding. The register kept by the Honorary Secretary had also been the means of many members securing employment as dispensers. The committee for 1910 were then appointed, being, with two exceptions, the same as last year. Mr. Howell, addressing the members, formulated a policy for their guidance in any legal or professional circumstances that might arise during the ensuing year.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT CXXI.

ON THE ELECTRO-CARDIOGRAPHIC CURVES YIELDED BY ECTOPIC BEATS ARISING IN THE WALLS OF THE AURICLES AND VENTRICLES.*

BY

THOMAS LEWIS, M.D.LOND., M.R.C.P.ENG., D.SC.WALES,

PHYSICIAN TO OUT-PATIENTS, CITY OF LONDON HOSPITAL, AND ASSISTANT PHYSICIAN, SEAMEN'S HOSPITAL SOCIETY, GREENWICH.

(From the Research Department of University College Hospital Medical School.)

RECENT observations carried out upon a number of patients and upon the heart of the dog beating *in situ* justify the following conclusions.

1. In the dog an artificially excited ventricular contraction yields an electric complex which is distinctive of the area in which it originates. The areas from which specific types of curve may be obtained are numerous. It is not true that there is but a single type for right and left ventricle, and it is equally untrue that certain known types are evidences of hemisystole.

The identification of specific types of curve should prove of considerable value in accurately locating restricted lesions of the heart in clinical work.

2. The type of ventricular complex given by a ventricular beat originating in a single focus is surprisingly constant; it is largely, if not entirely, independent of the phase of diastole in which it occurs, provided that it is not complicated by the complex of a commencing ventricular contraction the result of a normal auricular impulse. Under the last-named conditions very intricate curves are produced.

3. Within a small error of measurement the length of an ectopic ventricular complex is the same as that of the normal ventricular complex (the same feature is noticed in clinical curves, and in the ventricular complex of an auricular extrasystole). This fact is of considerable value in the interpretation of abnormal electro-cardiographic curves.

4. Ventricular ectopic complexes are frequently complicated by the superimposition of normal auricular complexes occurring at the same time. The auricular and ventricular effects may usually be separated. The same statements apply to clinical curves.

5. Many areas of the auricular musculature, when excited, propagate contraction waves of which the electric complexes are distinctive. The auricular complex may be normal in form, diminished or inverted. The type of P variation which most closely resembles the normal P variation is obtained on stimulation of the superior vena cava. Such a type of curve is never obtained from the region of the inferior vena cava. This fact points to the *origin of the normal heart-beat in the neighbourhood of the superior venous inlet.* (That the pacemaker of the heart is constant in position is evidenced by the constancy of the shape of the normal P variation.)

6. The ventricular complex resulting from an ectopic auricular impulse always commences with a base negative effect. There is considerable variation in the type of the complex as a whole, according to the phase of the ventricular diastole in which it occurs. The most conspicuous variations are an increase in the amplitude of R during later diastole (and this may occur to such an extent that it actually exceeds that of the normal R peak), and an inversion or decrease of T according as the ventricular complex commences in early or late diastole respectively. Variations in the R and T peaks of the post-extrasystolic contraction are also seen. Somewhat similar variations are met with in clinical cases.

7. Increase of the P-R interval is not uncommon in instances of early auricular extrasystoles.

8. Many of the clinical curves of single and successive ectopic beats have been duplicated experimentally. They will be reported at a later date.

9. In patients, the constancy of the type of extrasystolic electric complex from day to day, month to month, or even year to year, is often very striking. It indicates the constancy of the exciting agent and the limitation of the area of its influence.

* The expenses of this work have been largely defrayed by grants from the British Medical Association and the Royal Society.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

KALA-AZAR IN THE YANGTSE VALLEY.

FLEET SURGEON P. W. BASSETT-SMITH having very kindly published, with a drawing, in the JOURNAL of December 4th, 1909, p. 1614, the case of kala-azar discovered by Surgeon G. B. Scott, R.N., and the writer amongst the in-patients at the Hospital of St. Vincent, Kiukiang, perhaps a few additional remarks upon the case might prove of interest.

Shortly after we found Leishman-Donovan bodies in liver-puncture material, the boy, aged 11, was placed on soamin injections, grains 5, every alternate day, until a total of 110 grains had been given. He benefited from the treatment, and early in August, about two months after treatment commenced, the spleen, which had reached formerly the pelvic crest, had shrunk to the level of the umbilicus, and the liver from 3 in. below the costal margin to a position where it was scarcely palpable. The anaemia improved, and the child, from being taciturn and dull, became brighter and more intelligent. This improvement continued for about two months, and then the disease showed signs again of making headway. The spleen commenced to increase in size, though the liver remained only slightly enlarged.

A second course of soamin was commenced early in October, and 10 grains were injected every alternate day. After 70 grains had been given diarrhoea set in, and the soamin was stopped. This diarrhoea soon yielded to treatment, but the patient did not improve. Bone marrow, fresh and in tablets, together with tonics and quinine, failed to arrest the extreme anaemia and emaciation. Lung symptoms developed, and the patient died on December 13th, 1909. No *post-mortem* examination was permitted.

It is interesting to note that a case of kala-azar, diagnosed by liver puncture, was under treatment last summer in a missionary hospital in or near Hankow. We are not, however, entirely certain that these cases come from some epidemic centre on the Yangtse. It was found on further investigation that our patient had been brought to this district some two years previously by his father, who had emigrated from Shantung province with his family to work on a local railway. The patient had suffered from fever and swollen belly before leaving Shantung. No other member of his family was similarly afflicted. So far no other cases of kala-azar have been sent in from the railway, though cases of *Schistosomum japonicum* are not at all infrequently seen, and are probably the cases of "big belly" reported to us as occurring in the vicinity of neighbouring waterways. It is not improbable that the endemic centre is in Shantung, from which province reports of cases are often made. Three years ago a terrible famine in Shantung drove numbers to emigrate to the Yangtse provinces. It is likely that the disease will spread along the river, but at present cases would seem to be few and probably imported.

It is interesting to note that cases of kala-azar in Europeans were reported as having occurred amongst those who had taken part in the 1900 campaign against the Boxers. The troops operated for the most part in Chili, which borders on Shantung. Fleet Surgeon Bassett-Smith's patient had been to Tientsin as well as to Yangtse ports, so that a northern origin to his cases cannot be entirely eliminated. The subject is one of extreme interest, and that is my excuse for adding these notes to Fleet Surgeon Bassett-Smith's interesting communication.

Kiukiang. ALEXANDER C. LAMBERT.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

PERTHSHIRE BRANCH.

Perth, Friday, February 11th, 1910.

DR. LYELL (Vice-President) in the Chair.

Ichthyosis.

DR. LYELL showed a case of ichthyosis in a girl, aged 18, whom he had already shown in 1906. The condition started shortly after birth in a very aggravated form and with unusual distribution, having a number of flexor surfaces involved. At present there was very marked improvement, especially in the hands, which were free from crusts and more movable. The armpits and knees were still very bad.

Disseminated Sclerosis.

Dr. PATON showed a case of disseminated sclerosis in a married woman, aged 27, admitted to the infirmary in October, 1909. Nine years previously she had an ovary removed—reason unknown; at the same time a retroverted uterus was corrected. Six years ago she had a healthy child, and ever since had had what she termed nervous turns and severe headaches, also at times a great hatred to her child and feelings that she would like to kill it; at the same time she took a violent dislike to her husband. Coupled with the mental symptoms were also attacks of marked tachycardia. On admission she complained of severe headache, continuous, but worse some days than others. Optic atrophy, retinitis, and nystagmus were present. The other nerves of special sense were normal. The knee-jerks were markedly exaggerated and Babinski's sign very marked, causing some difficulty in walking. Efforts were made to relieve the headaches by many drugs on admission, such as chloral, phenacetin, salicine, quinine, etc., and to increase the body weight. Later she had the high frequency current and potassium iodide up to 180 grains in a day. The present condition was as follows: Tongue very furred, appearance pale, nystagmus and eye symptoms much improved, knee-jerks and Babinski's sign still well marked. No desire to go home. Prognosis very bad. The disease would probably end in general paralysis; in any case the patient would have to remain under asylum care.

Malnutrition.

Dr. PATON also showed a case of malnutrition in a boy of one year. The infant was nursed by its mother the first two months and did quite well; then it was put on Mellin's food, then Allenbury's, both of which disagreed. Every three weeks the child had a coffee-ground vomiting lasting four or five days. Its weight was now 11½ lb. The child had been treated for gastric catarrh in Edinburgh and Glasgow, *x*-rayed, etc. It was admitted three and a half weeks ago, and so far had had no attacks of vomiting, but had only gained ½ lb. Washing out of the mouth and nutrient enemas of Carnrick's liquid peptonoids had been tried, and later albumen water. The father and mother were both healthy, and no tuberculous history could be made out.

Wound of Bladder.

Dr. STIRLING showed a ploughman, aged 22, who was run over by a cart in the region of the pelvis. When seen by the local doctor 2 oz. of blood were drawn off from the bladder. On admission next day 3 oz. of blood were drawn off, and a diagnosis of rupture of the bladder was made. On incising above the symphysis pubis a spicule of bone was found which had penetrated the bladder longitudinally about a quarter of an inch. As there was great difficulty in suturing the wound in the bladder, a tube was put in and the urine siphoned off. After forty-eight hours, as the condition was not satisfactory, a perineal incision was made to drain from below. A catheter had now been kept in, and the wounds were healing up.

Haematoma of Scrotum.

Dr. STIRLING showed a man, aged 44, who had received a blow over the inguinal canal. On admission he had a haematoma and oedema of the scrotum, and was passing a very small quantity of urine. On incising the scrotum urine came away. A catheter could hardly be passed on account of a series of strictures in the urethra. That was gradually being overcome, and the patient was recovering.

Appendicitis.

Dr. STIRLING showed two cases of appendicitis. In the one case the patient was very ill, but there were no symptoms of appendicitis; in the other the symptoms were of perinephritic abscess, but on opening in the region of the right kidney, a pocket of pus was found in the region of the appendix and drained. The kidney was all right. Both cases were recovering.

Other Surgical Cases.

Dr. STIRLING also showed two cases of wounds of the eye, both doing well; and a case after removal of half the tongue for carcinoma.

Apoplexy with Unusual Symptoms.

Dr. TAYLOR showed a case of apoplexy in a man, aged 30, with unusual symptoms. There was paralysis of the right side of the face and body, loss of speech, swallowing was very difficult, and there was loss of control of the bladder and bowel accompanied by a pulse of 36 to 40 per minute. A slight systolic murmur of the heart was heard. The lesion was evidently a mild medullary one extending down into the pons and causing the slowing of the heart's action. After nine weeks both speech and locomotion are quite good.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF BALNEOLOGY AND CLIMATOLOGY.

AT a meeting held on March 9th, a discussion on *Arthritis deformans* was opened by Dr. LLEWELYN JONES (Bath). Under this title he contended that three distinct conditions might be recognized, namely, rheumatoid arthritis, osteo-arthritis, and infective arthritis. Etiologically, the salient characteristic of rheumatoid arthritis consisted in the frequency with which it arose in sequence or association with diseases of an infective or toxic nature; hence the strong presumption that this disease was of a similar origin. From an anatomical point of view the primary changes took place in synovial membrane and periarticular tissues, the cartilage being only secondarily involved. Ultimately secondary atrophic changes ensued involving skin, bone, and cartilage, with fibrous and bony ankylosis. Clinically the condition might be defined as a progressive symmetrical polyarthritis running an acute or chronic course, diversified by remissions and exacerbations. As an arthritic disease it was remarkable for the variety of its collateral phenomena, vasomotor symptoms, pigmentation, localized sweatings, severe muscular atrophy, and in some cases glandular and splenic enlargements. Constitutional symptoms were well marked. Etiologically considered, infective or toxic disorders did not seem to be so intimately related to the genesis of osteo-arthritis, whereas the influence of trauma, so inconspicuous a feature in rheumatoid arthritis, was very much in evidence. Anatomically the essential and primary lesions were in the bone and cartilage which underwent enlargement and hypertrophy, the changes in the synovial membrane taking place secondarily. Bony ankylosis never occurred. Clinically, constitutional symptoms were slight or trivial. The character of the joint swellings differed markedly from the smooth spindle-shaped swellings of rheumatoid arthritis, the outline of the joint being broken and irregular owing to the presence of bony outgrowths studding the lines of junction of the articular ends. Osteo-arthritis was

much more a disease of joints, and joints only, than rheumatoid arthritis, where articular lesions formed only one feature in a very varied clinical picture. Infective arthritis he considered chiefly in relationship to the more acute forms of rheumatoid arthritis with which confusion chiefly occurred. After excluding acute articular rheumatism, acute polyarticular gout, acute gonorrhoeal rheumatism, and secondary syphilitic arthritis, he passed on to consider the clinical features differentiating acute rheumatoid arthritis from the large group of infective arthritides hitherto unaffiliated to any special germ. He emphasized the importance of carefully eliciting the previous history for recent occurrence of toxic disorders known to be followed by arthritis, such as dysentery, typhoid fever, and so forth, and thus avoiding their confusion with acute rheumatoid arthritis. Again, in the presence of local foci such as pyorrhoea alveolaris, otorrhoea, etc., he deprecated the too ready assumption that arthritis occurring in such an association was necessarily acute rheumatoid arthritis, as undoubtedly many of these cases were instances of infective arthritis. He laid stress upon the following points of differentiation. In infective arthritis constitutional symptoms were more severe, splenic and glandular enlargements almost invariable, with leucocytosis and secondary anaemia. Only a few joints were attacked, and these at the onset of the malady, by preference the larger articulations, as opposed to the polyarticular distribution in rheumatoid arthritis, with preference for the smaller. Distribution was erratic, not symmetrical, and there was an absence of collateral phenomena distinctive of rheumatoid arthritis. Dr. Fortescue Fox doubted whether there was sufficient evidence for classifying arthritis as atrophic or hypertrophic, or according to its commencement in the cartilages or synovial membranes. The condition was essentially degenerative, and the form and situation depended much on the period of life and the mixture of other causal elements. The infective element was predominant in the earlier decades. In middle life degenerative arthritis was often mixed with gout, and senile arthritis was largely traumatic in origin. A true arthritis might be the result of gout. Dr. Preston King (Bath) said his own experience led him to believe that rheumatoid arthritis was not so much a disease by itself as the result of infection from various centres. Dr. Jones's distinctions between rheumatoid arthritis and osteo-arthritis, with hyperextensions and ankyloses belonging to the former and lateral subluxations to the latter, were somewhat bewildering. Dr. Buckley (Buxton) considered that while the types described were easily recognizable in well-marked cases, they merged one into another, and that hypertrophic arthritis sometimes was a late stage of the atrophic form. He had seen this occur, and believed that it represented an attempt at repair, and was thus in some degree a measure of the resistance of the system to the disease. Admitting an infective origin, it was necessary not to lose sight of other factors or predisposing causes which modified the form of the disease. Dr. Hale White considered that there was a distinct disease, the bacteriology of which was unknown, which should be called rheumatoid arthritis. Sometimes similar symptoms were caused by a known infection, then the name of the offending micro-organism should be prefixed to the phrase "rheumatoid arthritis." Dr. T. Fred. Gardner (Bournemouth) wished to emphasize the fact that many cases of rheumatoid arthritis presented an early history of arrested tuberculosis, most often showing itself as tuberculous lymphadenitis. He agreed that the character of the "soil" as shown in ordinary tubercle was significant. He also pointed out that in long-standing cases symptoms of spinal cord degeneration with features of bulbar paralysis ensued, representing an ascending degeneration in the cord itself. Mr. Gordon Watson said he believed that Dr. Llewelyn Jones divided arthritis deformans into two main classes, the synovial (rheumatoid) and the bony (osteo-). Broadly speaking, he would like to argue that these two main classes were quite distinct in their pathology, the former infective, and the latter traumatic. Of the latter class he had many examples following definitely on injury to a healthy single joint in young people. Dr. F. H. Humphries made remarks concerning treatment by high candle-power electric light placed in a suitable reflector, followed by an administration of static electricity. Mr. Midelton (Bournemouth) said further experience had confirmed his belief in the efficacy of continuous counter-irritation in the treatment of arthritis deformans. He mentioned the case of a patient suffering from this malady complicated by exophthalmic goitre. She had resisted treatment previously, but gained 28 lb. in weight, and her arthritis was greatly benefited during a course of continuous counter-irritation without any attempt at over-feeding. Dr. Luff also took part in the discussion. Dr. Solly (Harrogate) believed that in all cases described as rheumatoid or osteo-arthritis, atrophic or hypertrophic, mixed infection was probably present, and the combined action of various organisms, mixed in different proportions, would explain many variations in the classes of symptoms. Many forms of arthritis cleared up rapidly after the removal of some apparently trivial but constant source of septic infection, such as pyorrhoea alveolaris, or chronic nasal or tonsillar catarrh. Chronic colitis and chronic leucorrhoea seemed to be responsible in cases which had come under his observation. Dr. Ackerley (Llandrindod Wells), though he acknowledged that there was some convenience in using a comprehensive term, thought it would be wiser if, when a case of arthritis was seen, it was called simply an arthritis, and an endeavour were made to discover the cause or causes in that particular case. The arthritis was only one manifestation of the disease. But what was much needed was a more thorough study of the soil. Recognizing the etiological factor played by gonorrhoea, pyorrhoea alveolaris, and other forms of sepsis, what was it that determined an arthritis in one man and not in another? He doubted whether there was a real distinction between acute and chronic cases. Was it not possible that the chronic forms simply depended on a smaller daily dose of the particular toxin, or greater personal resistance to its effects? The discussion was adjourned till April 20th.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

At a meeting held on March 4th Dr. Neville Wood, President, in the chair, Mr. Donald Armour read a paper on the *Treatment of brain tumours*. The paper was illustrated by reference to cases, lantern slides, and specimens. He pointed out the rapid advances of cerebral surgery in the last few years, and regretted also the want of early diagnosis and consequent late recourse to the surgeon, so that he generally had not to deal with an early stage and small size. He disagreed with the classification of Walton and Paul from their statistics as to "operable," "inoperable," and "doubtful," pointing out that by operable they evidently meant curable, and that their statistics were based upon cases in which death was caused by the size of the tumour, and that statistics to be of any value must be derived from the records of cases operated on fairly early. He drew attention to what he considered a lack of clear distinction between the radical and palliative operation. He would describe as operable any case of brain tumour in which the growth could be wholly or partially removed with subsequent benefit to the patient. He pointed out the importance of decompression at an early stage before vision began to fail. As to syphilitic tumours, surgical interference was imperative in those cases where symptoms were increasing in spite of adequate medicinal treatment, and where localization was exact, and he would say that when diagnosis and localization had been arrived at, unless there was decided improvement under medicine in six weeks' time, operation should be recommended, and immediate operation without trying antisyphilitic remedies when the symptoms were urgent and the risk to life too great to try medicinal measures. Before operating, it was impossible to say whether the case would be suitable for a radical or a palliative operation. Whenever possible the growth must be removed. Palliative operations were practically free from risk to life, and were of the greatest value in relieving the distressing symptoms of headache, vomiting, and optic neuritis with its resulting blindness. The classes of cases suitable for palliative treatment were: (1) Those in which

the tumour could not be removed, though localized. (2) Those in which the tumour could not be localized but in which operation was demanded for the relief of symptoms. He discussed other palliative operations, such as lumbar puncture, punctures of lateral ventricle, none of which could compare with trephining. In a decompression operation, the opening should be over as unimportant an area of cortex as possible, and means taken to restrain hernia cerebri. The questions referring to the exploration for subcortical growths were discussed, and also the advisability under certain circumstances of doing the operations in two stages, as was done at the National Hospital, Queen Square. He referred to the dangers arising from interference with the respiratory and cardiac centres. To sum up, he would divide cases of brain tumour into three classes from the point of view of operation:

1. Those in which the tumour is completely removed and the patient cured.
2. Those in which it can be removed in part with marked temporary benefit to the patient.
3. Those in which the tumour cannot be removed at all, but the patient is relieved of the painful symptoms of the disease by the operation.

The paper was discussed by the PRESIDENT and Dr. GRAINGER STEWART.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

AT a meeting held on March 11th, Dr. H. COOPER PATTIN, President, in the chair, Dr. T. W. N. BARLOW, in a paper on *Disinfectants*, said his object in bringing the subject before the society was to review the situation as regards disinfectants and the practice of disinfecting, to provoke discussion, and to bring to bear on the question a little common sense and a due sense of proportion with respect to the value of the process as a means of preventing disease. He considered that the causes of the wide differences of opinion which existed as to the necessity for certain disinfecting work were due to the lack of a sense of proportion, and also to the fact that most of the advocates of more frequent and general disinfection were not medical men, and consequently had no practical knowledge of disease. He suggested that much of the disinfection as now carried out was nothing more than quackery in its worst form, while of the remainder a great deal was useless, owing either to the disinfectant itself or to its manner of use being valueless. Much public and private money was in consequence wasted in the purchase of disinfectants, and the distorted view which the public had of the value of disinfectants and of disinfection constituted a real danger. After referring to the large number of so-called disinfectants on the market, and to what he assumed were some of the methods adopted by the makers of them to draw attention to the value of disinfectants generally, Dr. Barlow enumerated some of the uses to which disinfectants were commonly put. They included the watering of streets, sprinkling of ashpits, sluicing of drains, sprinkling on open places, and the hanging in lavatories, etc., of evil-smelling tabloids or so-called ozone-producing materials, whose smell cloaked that of an uncleanly unwashed urinal. The only rational use of disinfectants was in connexion with infectious fevers, for there was the definite object in view of destroying the germ which caused the disease, and thus preventing the spread of infection. Even in this a great deal of disinfection was done on assumption, for so little was known of the germs causing the common infectious diseases or of the factors concerned in their spread. Dr. Barlow referred to the experience of the medical officer of health of Providence, Rhode Island, who had abandoned house disinfection after diphtheria with no untoward results so far as an increased incidence of recurrent cases was concerned. The dangers of the universal and indiscriminate use of disinfectants were, in the author's opinion, very real. Some persons thought it was not necessary to be ordinarily clean, provided a disinfectant with a strong enough smell was used. Ashpits which were intended to be used for ashes had decomposable material put into them with impunity, so long as the decomposing smell was masked by the smell of the disinfectants, and public urinals and similar places, instead of being properly cleansed, were treated with disinfectants. Dr. WILLIAM BUTLER said that although he had recommended the discontinuance of chemical disinfection, it was recognized that if it were abandoned the public would consider that proper precautions were not being taken to prevent the spread of disease. He disinfected after all cases of erysipelas, a disease which, in his opinion, was a real danger to the puerperal woman. Among some of the advantages of disinfection were the thorough cleansing of the house concerned, and unless a disinfectant was used, the sheet hung before the doorway of an infected room would not be damped. Dr. J. F. J. ALLAN disapproved of the indiscriminate distribution of disinfectants in the form of fluids or powders. The disinfection of schools was a big question, but there ought to be a greater insistence upon greater cleanliness in school buildings. He gave instances of infection being carried by nurses. Dr. S. C. LAWRENCE thought that if disinfectants were ordered only by medical officers of health, much less would be used. He considered that there was a distinct danger of cleanly ways being discouraged by the too free use of disinfectants. Dr. P. CALDWELL SMITH said he insisted upon ordering all the disinfectants in his department, and also on the disinfection being carried out by his staff. He also instanced cases in which infection had been carried by nurses of fever hospitals. Dr. F. E. FREMANTLE considered that until the squire and the parson and the educated classes generally could be induced to regard disinfection in its proper light, it was useless to expect much from the public generally. Dr. EDWARD SERGEANT was not disposed to advise the abandoning of the use of chemical disinfectants, although he considered that much money was wasted through their indiscriminate and injudicious use. Dr. HERBERT PECK had found good resulting from the disinfecting and scraping of pails and the walls of privies after an outbreak of typhoid fever. Dr. HERBERT JONES referred to the harm done by using disinfectants in earth closets, and thereby preventing the bacterial action of the earth.

OXFORD MEDICAL SOCIETY.

AT a meeting on March 11th Mr. H. S. SOUTTAR gave a demonstration of the *Gastroscope* invented by himself. He said the mucous membrane was the all-important element in stomach diseases, and that before the introduction of the gastroscope no method existed for distinguishing the different macroscopic lesions. He then described the appearance of the gastric mucous membrane in various sites; the fundus could easily be distinguished from the pyloric end, and the pylorus, with its radiating folds, formed a most conspicuous object. The walls of the stomach are in constant rhythmical motion. The passage of the instrument ordinarily required general anaesthesia; difficulties were usually felt opposite the cricoid cartilage and at the cardiac orifice, but with gentle pressure the resistance could be overcome. By the courtesy of the staff of the Radcliffe Infirmary, two patients suffering from doubtful gastric disease were then examined by this method, in one of whom the diagnosis of gastric ulcer was established.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held on February 24th, Dr. GEORGE WILKINSON, President, in the chair, Professor HARVEY LITTLEJOHN, in a paper on the *Medico-legal aspects of death from asphyxia*, dealt first with the general appearances in death of this kind, and showed that none of them were characteristic. Fluidity of the blood, petechial haemorrhages, congestion of organs, etc., were all found in death from a variety of causes. In violent asphyxia such as hanging, strangulation, smothering, drowning, a definite diagnosis could be made only when there was evidence of the asphyxiating medium—that is to say, in hanging, strangulation, and smothering, local marks of violence; and in drowning, proof that water had entered the lungs during life. The mechanism of death by hanging and strangulation were then considered together with the appearances found in such cases. The special difficulties in the diagnosis of overlying were discussed, and it was pointed out how unsatisfactory statistics were in this country as to the frequency of death from this cause. Richter's work on the subject was referred to and his views accentuated, namely, that in the majority of cases of infants found dead

in bed under circumstances suggestive of overlying, careful *post-mortem* examination generally showed that another and sufficient cause of death—such as bronchitis, broncho-pneumonia, or gastro-enteritis—was present. The relation of status lymphaticus, enlargement of the thymus gland, rickets and laryngeal spasm, metabolic toxaemia to sudden death in infancy were also discussed in this connexion. As regards drowning, the work of recent investigators was cited, showing the uncertainty of the formerly accepted signs of death from this cause and the fallacies which the entrance of water *post mortem* into the air passages might give rise to. Absolute proof of drowning could be obtained by showing dilution of the blood in the left side of the heart as compared with that on the right side and in the body generally. The means by which this proof might be obtained were indicated. Mr. GRAHAM SIMPSON showed three cases in which the cystoscope had been used: (1) A case of *Perinephric abscess* containing staphylococci, possibly secondary to an acute necrosis of the femur twenty years before. (2) A case of *Vesical calculus*, in which the patient had passed numerous phosphatic stones for the last few weeks; a uric acid stone was removed, but no other cause was found for the formation of phosphates. (3) A case of *Tumour of the kidney*. It had been present for three years and was of large size, but the patient had presented no urinary symptoms; the urine was normal, and cystoscopy (after injection of indigo-carmine) showed the excretion to be similar in amount and colour. The kidney was removed and a large tumour found at its lower end; it had destroyed the lower third of the organ, but had not invaded the pelvis. Mr. MILES H. PHILLIPS showed: (1) A *Uterus containing a papillary carcinoma of the corpus* and a submucous cervical fibroid, the size of a golf ball. It had been removed by the vaginal route from a multipara of 56. She had consulted her doctor on account of a constant watery discharge, which she had supposed to be urine, but which was found to be thin sero-pus. (2) A *Uterus bearing a large submucous fibroid*, half of which showed characteristic sarcomatous change. Discovery of this malignant change prompted removal of the cervix eleven days after the primary operation. The patient was a spinster of 35 years. (3) A corpus uteri in a state of *Subacute metritis and double pyosalpinx*. The left ovary was also removed, as it was closely adherent to its corresponding tube, and contained a fibroma 1 in. in diameter. The patient, aged 29, had contracted gonorrhoea two years previously. In each case the convalescence was uncomplicated.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting held on February 24th, Dr. T. R. BRADSHAW, President, in the chair, Dr. THOMAS BUSHBY read notes of a case of *Acute visceral syphilis* resulting in a permanent cardiac lesion. The patient had come under treatment suffering from a sloughing condition of the soft palate and serious symptoms of chest disease. He was found to be affected with mediastinitis, pericarditis, endocarditis, and right pleural effusion. His general condition rapidly improved under mercurial treatment, but as the case progressed the physical signs of marked aortic stenosis developed, with great hypertrophy of the heart. The PRESIDENT suggested that the case might become one of infective endocarditis. Dr. J. M. BUCHANAN considered that a cicatricial condition resulted in such cases rather than a true valvulitis. Dr. WARRINGTON mentioned that syphilitic disease of the vessels occurred earlier than was usually imagined after the primary lesion. Dr. E. E. GLYNN said that ten years' experience in the *post-mortem* room had shown the great rarity of cardiac syphilis; three true examples had been found, and in all the lesion was in the muscles in the form of gummata. Mr. D. DOUGLAS CRAWFORD read a note on *Chronic prostatitis*, which he suggested was often overlooked or mistaken for other affections. He emphasized the importance of rectal examination in all cases of chronic urethral discharge. Prostatic massage was a valuable means of treatment. His remarks were illustrated by the relation of a number of cases. Mr. F. T. PAUL mentioned a case in which apparently gonococci had continued active for five years. The PRESIDENT mentioned a case in which this condition simulated for a time renal disease, and Mr. PARKER spoke of the value of a bland non-alcoholic dietary. Dr. O. T. WILLIAMS read a paper on *The nature and therapeutic indications of the fat compounds*. Reviewing the work done by Dr. J. Maclean and himself, he showed that the fats in the body were not neutral fats, but to a large extent phosphatides. This explained why fat stains had no effect on the combined fats of the tissues, such stains acting only when these bodies had been disrupted and the fat in them liberated from combination with phosphorus and nitrogen-containing groups. The various organs had various amounts of these bodies which were very unstable. The function of the liver and possibly other organs in desaturating fatty acids was considered. The practical application of these observations was shown in a consideration of the influence of unsaturated fatty acids, such as are contained in cod-liver oil, on the metabolism, especially in phthisis. Four cases were recorded in which the administration of cod-liver oil had a marked effect on the metabolism, the fat absorption being greatly increased, as also was the nitrogen retention. The patients were able to take as much as 3 oz. of cod-liver oil without any ill effects. These observations were carried out in conjunction with Dr. C. Forsyth. Several members spoke about the use of cod-liver oil in phthisis, the general opinion being that small doses were as beneficial as larger ones. Dr. J. HILL ABRAM said that if the virtues of the oil were due to the fatty acids contained, the darker oils should be more useful; that had not been his experience. He advised that the oil should be given apart from meals. After an interesting discussion and remarks by Dr. FRED. WILSON on some researches made by him, Dr. WILLIAMS replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held on February 25th, Professor J. B. HELLIER, President, in the chair, Mr. H. UPCOTT read a paper dealing with *Iso-haemolysis in malignant disease*. He described a technique for carrying out the tests with minimal quantities of serum and corpuscle emulsion. Of 86 persons examined, 34 had carcinoma; 56 per cent. of these were shown to have haemolytic serums. Among 5 patients with sarcoma there was only 1 whose blood was haemolytic; 50 per cent. of the serums from cases of tuberculosis were positive. There were 27 patients suffering from various other affections; only 2 of these were positive—one a youth with a chronic hydrocele, and the other a man with paroxysmal haemoglobinuria. Ten normal persons were all negative. The resistance of red cells to haemolytic serums was discussed, and brief mention was made of Elsberg's cutaneous haemolytic reaction in cancer. Dr. W. GOUGH read a paper on a case of *Malignant disease of the cervix uteri, treated by Wertheim's hysterectomy, with resection of one ureter*. Dr. E. F. TREVELYAN showed (1) a man aged 34 with *Tabes*, who had developed, whilst under observation during the past two years, a paralysis first of the right sixth, then of the left third nerve, and more recently of all the external muscles of both eyes. There remained a very slight external movement of the left eye, accompanied by nystagmus. The knee and tendo Achillis jerks were still present. Gastric crises occurred frequently, and there was a hystory of syphilis. (2) A youth aged 15 with *Habit spasm* of three years' duration. The movements consisted of involuntary raising of the upper lip. The head remained turned to one or other side, and the eyes were partially closed. There were no mental symptoms. He was improving under electrical and exercise treatment. Dr. E. O. CROFT showed a specimen of *Primary epithelioma of the vagina* from a multipara aged 46. The growth was oval, raised, and flattened, hard, and showed early ulceration on the surface. It was situated on the posterior and upper part of the vaginal wall and was free from the rectum. No other disease was present in the uterus or elsewhere. Owing to the small distance between the healthy cervix and the upper margin of the growth it was thought better to remove the uterus together with the growth *per vaginam*. Dr. C. OLDFIELD showed (1) a specimen of *Carcinoma of the cervix uteri* removed four years ago by Wertheim's operation. The patient had remained well and free from recurrence. Though she had well-marked

phthisis at the time of the operation, she now appeared cured of that also. (2) *Carcinoma of cervix uteri* with double salpingo-oöphoritis. The growth was extensive and had been diagnosed seven months before. The patient, though fat and alcoholic, had recovered except for a leakage from the bladder, a piece of the wall having been removed owing to implication in the growth. Dr. T. CHURTON gave an *X-ray demonstration of an extra-cerebellar tumour*. Dr. H. J. ROPER showed a case of *Irreducible intussusception* in a child treated by short-circuiting, with recovery. Mr. LAWFORD KNAGGS showed a patient in whom both *Upper jaws* had been *removed for epithelioma*. Mr. A. L. WHITEHEAD showed a case of *Myopia with progressive choroiditis and detachment of the retina*. The PRESIDENT showed a specimen of *Adeno-carcinoma corporis uteri*. Mr. J. STEWART showed a testicle and sac from a case of *Strangulated hernia with partially descended testis* in an infant three months old. Dr. MAXWELL TELLING showed a case of *Bazin's disease* (erythema induratum). Specimens and cases were also shown by Mr. H. LITTLEWOOD, Mr. W. C. MORTON, Mr. J. F. DOBSON, Mr. H. COLLINSON, Dr. ALEXANDER D. SHARP, and Mr. MICHAEL A. TEALE.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held on Tuesday, February 15th, at the Royal Infirmary, Dr. WARD-SMITH in the chair, Dr. T. JASON WOOD read a paper on the *Treatment of fractures*. He said he intended his remarks to apply to fractures of the limbs, and, after pointing out that these had assumed an added importance in recent years, owing to the operation of the Workmen's Compensation Act, in that practitioners were frequently asked to express an opinion as to the length of time a patient would be disabled by a fracture, he went on to say that the first essential to successful treatment was a correct diagnosis. It should never be forgotten that there might be a slight fracture in the neighbourhood of a dislocated joint, which might have great influence in the prognosis of the case. The use of *x* rays was of undoubted value. In setting the fracture it was of the greatest importance to avoid rotatory deformity, especially in the lower limb. In cases of impaction at hip and shoulder no attempt should be made to break it down, unless there were rotatory deformity, or in a young patient. An impacted Colles's fracture should always be reduced. In all cases gentle massage should be commenced from the first, and after a week in a favourable case passive movement might be commenced. Ununited fractures in which there was free mobility after prolonged treatment were suitable for operation, freshening up the ends of the bones, and wiring in good position. In about 50 per cent. of cases even this was unsuccessful. The treatment of compound fractures under the antiseptic system was most successful. If the wound were at all extensive it was only reasonable to suture the bones at the time. Primary operation for simple fracture was not advisable. As regards fracture of the patella, primary operation should always be undertaken in a healthy patient under 50 years of age. Fracture of the olecranon should not be operated on at first, as an excellent result could be obtained by ordinary methods, and secondary operation could always be performed if necessary. The paper was discussed by Drs. WARD-SMITH, ROWE, LANKESTER, and GOYDER. Dr. J. H. ROWE read a paper entitled *Some remarks on genius*.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT a clinical meeting on March 2nd, Mr. A. FULTON, President, in the chair, Dr. MACKIE showed a case of *Cerebellar disease* in a middle-aged man. The classical symptoms of giddiness, sickness, nystagmus, and unsteadiness of gait, especially when the eyes were closed, were present. The nystagmus was of an outward and cerebellar type; no optic neuritis was present. Mr. WILLIS and Mr. TAWSE showed a boy of about 16 years with a *Carcinomatous growth blocking the nasal cavity*. It was of some months' duration, and blocked the left nasal cavity from the anterior nares in front to the posterior behind. Apparently it did not arise from the antrum. The growth was very vascular, and a section showed it to be a most virulent carcinoma. No abnormal glands could be discovered. Opinion of the members was divided as to the advisability of operation. Dr. JACOB showed a case of *Naevus with a peculiar distribution along the right intercostal nerves*. This was not present at birth, and sometimes the growth discharged. Dr. Jacob demonstrated the treatment of naevi by solid carbon dioxide in this case. The temperature of the frozen mass was about 80° below zero, and he applied this to the growth for 10 seconds. Details of success by this method were given. A demonstration was given of the value of *X rays in a case of aneurysm of the ascending aorta*, where the only clinical symptom was hoarseness. Dr. JACOB showed pathological specimens of *Sarcoma of both suprarenal glands*. The patient had been at work ten days before death, and collapsed very suddenly. There was no bronzing of the skin in this case. Dr. Jacob also showed a child with *Meningitis*. This child was both blind and deaf, and showed choroidal changes typical of congenital syphilis. Besides these, two cases of *Enlarged liver* and one of a *Dilated stomach*, reaching to the pubes, were shown.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

AT a meeting held on March 4th, Dr. ALFRED A. YOUNG in the chair, Dr. T. K. MUNRO showed cases of: (*a*) *Syringomyelia*; (*b*) *Angioneurotic oedema*; (*c*) *Tabid arthropathy*; (*d*) *Progressive muscular atrophy complicated with herpes zoster*; (*e*) *Cerebral diplegia*; (*f*) with Dr. JOHN GUY, a case of *Dissociated anaesthesia*. Dr. ROBERT KENNEDY showed: (*a*) An *Intracranial tumour* which could not be localized during life, with photograph of the patient after a decompression operation; (*b*) a patient who suffered from *Traumatic paralysis* and atrophy of the right deltoid and teres minor muscles, and in whom suture of the divided circumflex nerve was followed by restoration of function; (*c*) a *Gasserian ganglion removed by the trans-zygomatic route*, with photograph of the patient showing area of anaesthesia. Dr. W. K. HUNTER showed: (*a*) A brain from a case of *Pseudo-bulbar paralysis*; (*b*) a case of *Friedreich's disease*; (*c*) a *Brain showing sub-cortical haemorrhage* limited to the post-central gyrus; (*d*) a brain from a case of *Amnesia verbalis*, with word and object blindness. Dr. JOHN M. COWAN showed casts and photographs from cases of *Acromegaly*; and, with Dr. BALLANTYNE, a case of *Hemiplegia with sensory disturbance and hemianopsia*. Dr. ARCH. G. HAY showed a compositor with *Paralysis of the thenar muscles* supplied by the median nerve. Dr. ALEX. MACLENNAN described a case of *Tuberculous meningitis* with unusual symptoms of cortical irritation. Dr. A. W. HARRINGTON showed a patient with *Charcot's disease of the knee joint*; and, with Dr. TEACHER, microscopic sections of the nerves, spinal cord, and medulla from a case of *Extensive peripheral neuritis*, in which paralysis of the larynx, palate, and pharynx were present. Dr. MUIR showed a number of pathological preparations: (*a*) of *Cerebral tumours*, and (*b*) from cases of *Cerebral softening*. Mr. HENRY RUTHERFURD showed: (*a*) Specimen of a large *Cerebral abscess*; (*b*) a *Cerebral tumour* from the neighbourhood of the corpus callosum (sections by Dr. Teacher); (*c*) with Mr. BATTERSBY, a preparation of a *Hydrocephalic head*. Mr. J. H. PRINGLE and Dr. TEACHER showed a preparation from a case in which *Thrombosis of the longitudinal and lateral sinuses*, with cortical haemorrhages, took place shortly after birth. Dr. JOHN H. TEACHER showed specimen and section from a *Cortical cerebral lesion* associated with aphasia.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

AT a meeting held on March 1st, Mrs. DICKINSON-BERRY, President, in the chair, Dr. MAY THORNE reported on the past year's work of the *Vigilance Subcommittee*. Several cases had been dealt with where advertisements had appeared for medical women for posts of school medical inspectors at salaries below the minimum approved by the British Medical Association. Thanks to the help of the Association and of the BRITISH MEDICAL JOURNAL, which had refused to insert such advertisements

and had published warning notices concerning the appointments, much had been accomplished. The various associations of medical women in England, Scotland, Ireland, and India had co-operated in upholding the dignity of the profession, and the subcommittee desired to express its appreciation of the loyal support it had received from medical women in bringing about the favourable results. Dr. GOWDEY read a paper on the *Medical inspection of school children* under the London County Council, in which she pointed out some of the advantages of medical inspection. It aimed at generally improving the health of the nation, and other objects were the prevention of the spread of infectious disease, the raising of the standard of cleanliness in the children, selection of those suitable for special schools, and education of the parents. The teachers were also greatly helped by a knowledge of the facts revealed by medical inspection. The speaker laid stress on the point that all children should be examined before any physical culture was undertaken. The methods of "routine" and "detailed" inspection were then described as carried out in the elementary schools by the medical officers of the London County Council, and an account was given of medical inspection in secondary schools. It was observed that the object to be aimed at was not the collection of statistics, but the treatment of defects. In the secondary schools scholarships could be terminated if treatment were not carried out by the parents of the scholars. In the discussion that followed Mrs. BERRY referred to the great necessity for the treatment of carious teeth, and referred to the work done in Germany by school dental clinics. Dr. THORNE commented on the poor physique of many London County Council scholarship holders whom she had come across. Miss CORTHORN emphasized the importance of ensuring that scholarship holders were sufficiently nourished, and said that it might be better to award fewer scholarships and spend the money saved on the feeding of the children.

NORTHERN ASSOCIATION OF MEDICAL WOMEN.

A MEETING of this Association was held at Liverpool on February 19th, Miss IVENS, M.S., in the chair; 22 members were present. Dr. MERRY SMITH (Manchester) gave an account of the work done by the Manchester branch of the association to secure the admission of women to the resident posts in the Royal Infirmary, Manchester. Dr. MARGARET DOBSON (Inspector of School Children under the Bradford Education Committee) read a paper on the *Medical inspection of school children*. She described the method by which she examined the children. They were afterwards divided into two groups—(*a*) normal, (*b*) abnormal, including all those children requiring either treatment or watching. The parents, if not present during the examination, were notified of any defect. Two months later the children were seen again. Dr. Dobson disapproved of the examination of children at the age of 13, because, when the time came for re-examination, the children were found to have left. She would prefer examination at the age of 12, a further advantage being that children not fitted for half-timers could be weeded out. Dr. Dobson described the treatment of the different diseases at the Bradford school clinic. She strongly advocated treatment at a school clinic on the following grounds: (*a*) Inadequacy of former methods. The Bradford children had been inspected and the parents notified of defects for nearly fifteen years. It was found that only 33 per cent. had received adequate treatment. (*b*) Government grant influenced attendance at the school clinic, this counting as a school attendance. (*c*) The cases were cured in the shortest possible time, attendance at the school clinic being enforced by the attendance officer. On the other hand, attendance for treatment could not be compelled by a house-surgeon or private practitioner. (*d*) Daily treatment could be given. The special departments of some of the hospitals were open only once or twice a week. The daily cleansing of such conditions as septic ears rendered them no longer a source of danger to the rest of the class. (*e*) By increasing the interest of the work a better class of officer would be attracted to it. The arrangements for the compulsory cleansing of dirty children were described; also the feeding of the hungry. Payment in the latter case was enforced from those parents who upon investigation were found to be able to afford it. The provision of clothing was now under discussion. The open-air school at Bradford was described. The stay of each child was prolonged a sufficient time to permit of complete recovery, as shown by blood counts or other proof. It was not removed to make room for others as soon as some improvement was shown. Dr. FRANCES HARPER (Medical Inspector of Schools under the Lancashire County Council) said that in her opinion great care must be exercised to prevent any lessening of the parent's confidence in the general practitioner, as in many cases the children had been taken to a dispensing chemist in preference to a medical man. In the absence of a school clinic Dr. Harper advocated the use of trained nurses to replace the attendance officer. Too much stress was laid on schedules; more freedom should be given. Great care should be taken to secure the co-operation of the children themselves. The teaching of hygiene was of great importance. The syllabus was too abstract and theoretical. Instruction in cleanliness and decency should be insisted upon. The children should be instructed in the use of the toothbrush and handkerchief. Frequent inspections should be made of their hair by the teacher in class, no remarks to be made in public, and no blame to be attached where pediculi were found. The hair should not be cut; indeed every attempt should be made to encourage a kindly relation between the inspectors and the parents and children. The inspectors should be called by a new name. Skilled dentistry was at present unavailable, but much preventive dentistry could be secured by the proper use of the toothbrush. Dr. KATHARINE DRINKWATER (Medical Inspector of School Children, Wrexham Education Committee) described her methods of examination. She found that only 30 per cent. received satisfactory treatment. Dr. LILIE JOHNSON (Medical Inspector of School Children under the Northumberland County Council) spoke of the greater difficulties encountered in following up the abnormal children in a country district as compared with a town district. Dr. CATHARINE CORBETT (School Medical Officer, West Riding, Yorks) stated that in the case of older girls absent from school on account of ringworm, etc., she had difficulty in securing adequate and persistent treatment, the mothers being well satisfied to keep them at home to help in the house. Many children had been found provided with faulty spectacles provided by quacks. Dr. CATHARINE CHISHOLM (Manchester) considered inspection of the children in high schools quite as important as among children of the poorer classes. In the Manchester High School, courses of instruction were given to the elder girls on the management of infants and allied subjects. Popular lectures in school hygiene had also been given to the mothers of the scholars, and had proved successful. Dr. MARY DAVIES (Liverpool) suggested that while the establishment of a school clinic in every town was desirable, the question should also be considered from the point of view of the general practitioner.

THE sum of £6,000 has been left by the late Mr. H. J. Leggett to be divided equally between the Great Northern Central Hospital, the Royal Free Hospital, and the Wood Green, Hornsey, and Southgate Passmore Edwards Hospital.

THE German Surgical Society will hold its thirty-ninth congress this year in the Langenbeckhaus, Berlin, under the presidency of Professor Bier. There seems to be every prospect that the congress will be one of exceptional interest, as the number of communications already promised is 129, the average number being 70. The subjects proposed for discussion are: The surgical treatment of epilepsy, to be introduced by Professor Krause of Berlin, who will deal with non-traumatic forms, and Professor Tilmann of Cologne, who will confine himself to the traumatic forms; the surgical treatment of stenosis and fixed dilatation of the thorax, to be introduced by Professor Freund of Berlin, who will give a general review of the subject, and Professor Mohr of Halle, who will discuss the indications; the surgical treatment of acute appendicitis, to be introduced by Professor Kümmell o Hamburg, who will treat of the means of lessening the mortality in appendicitis and the prevention of abscess and peritonitis; and Professor Sonnenberg, who will deal with the diagnosis and treatment of the early stage of acute appendicitis.

Reviews.

PERINEOSYNTHESIS.

ONE of the great problems of gynaecology is "perineosynthesis," as KÜSTNER conveniently expresses it. Authorities are not agreed as to the true nature of the supports of the pelvic floor—Halban, Arthur Keith, R. H. Paramore, and others holding different opinions with regard to the vagina, the perineum, and the sphincter and levator ani. Operators disagree quite as much about methods, steps, stages, and sutures, so that each has his own ideal perineorrhaphy, and falsely, as a rule, ascribes to his method that success which is really the result of his skill and special experience. It is not, therefore, surprising that different operators succeed with totally opposite methods. *Die individualisierende Operation* is a rational synthesis of Küstner's method,[1] in which the author endeavours to overcome the evils necessarily following misapprehensions about the principles of perineorrhaphy. He knows full well, as all who read textbooks know, how difficult it is to teach plastic surgery by text and diagrams, and in order to obviate certain difficulties he has given his treatise something of the form of an Atlas, the letterpress consisting of thirty-five pages containing a clear abstract of the principles and steps of a perineorrhaphy as understood by the author. The illustrations are not big plates, but in part large diagrams printed with the text; in part, and more specially, stereoscopic slides of cases of severe perineal lesions, prepared to obviate certain familiar difficulties in the representation of these morbid conditions by the aid of pictorial art.

Dr. Küstner's views are already well known to gynaecologists, as he has written and spoken much on this subject. In this atlas treatise his observations are short and clear and appear in big print. There are hardly any references, but on the other hand no clinical reports, though the photographs supply their place to a great extent, and are without doubt instructive. His principle is that it is necessary to individualize or particularize every variety of the lesion and every step in the operation. He reminds us that the laceration of the perineum, whether complete or incomplete, is never symmetrical, median, and perfectly antero-posterior, as is implied in many educational works; on the contrary, it is always more or less lateral and oblique. Hence the damage done to the muscles and ligaments involved is no simple matter anatomically; the cicatrization further complicates the disarrangement of these structures, and should the perineorrhaphy wound fail to unite by first intention more cicatricial tissue develops, entailing more damage to the important soft structures. The process of cicatrization from the date of the injury onwards must also be considered. As the laceration is never truly median, the structures on each side, unsymmetrical from the moment that they are rent asunder, necessarily become more and more so as the wider side and the narrower side are both involved in the scar, and this asymmetrical cicatrization of necessity varies considerably according to the obliquity of the wound and the health and treatment of the patient. Nor are the muscles equally developed in different women. Several methods followed exclusively by different experts and their pupils are faulty in any case, even were every patient under their treatment subject to the same degree of laceration and cicatrization. Küstner is therefore very severe on certain rule-of-thumb "incisions," utterly condemning Lawson Tait's method where nothing is cut away, not even the cicatricial tissue keeping muscular structures apart. Other "incisions" cut more morbid tissue away but not, he thinks, nearly enough. He compares his diagram of the outline of the H incision on the perineal tissues with his stereoscopic slides showing neglected complete rupture of the perineum, and contends that it is absurd to expect much permanent benefit to follow Tait's operation. On the other hand certain other methods look neat, but really signify an unintelligent sacrifice of normal soft structures, and an insufficient excision of scar tissue. Küstner attaches high importance to free and even dissection with the scalpel, especially in the narrower, deeper parts of the seat of operation. It allows of even coaptation of unbruised surfaces, which can never be ensured when the parts are snicked with scissors. The parts must be restored to their normal condition. If there be much scar much trimming is needed, if little it is otherwise. Next to the removal of the scar tissue union of the parted muscles is necessary; the ends must be dissected up from under the scar and united. We know that when the sphincter ani is simply united by the cicatricial tissue drawn up in the posterior tissues, it may act for a while but tends to become stretched after a short period. Küstner insists on the union of the carefully dissected ends of the sphincter by one or two catgut sutures. Howard, Kelly, and himself were, he insists, the first to practise this special suturing of the sphincter, Berry Hart, Brewis, Fritsch, and Cullingworth following their example. Küstner also reminds us that there are other muscles that require union, and that when operating on a young subject we must make the new perineum fit to resist laceration from the fetal head. In order to ensure success in operations on bad, complete, and old lacerations, the author lays down certain rules which all gynaecologists will study with interest. A sufficient number of buried catgut sutures are required to draw the deep parts, and more especially the muscles together. Wire thread should be used to unite the smooth muscle fibres of the rectal wall, and to bring in apposition the integuments of the perineum. Küstner prefers catgut to wire for the vaginal tissues. He defers an action of the bowels until about the twelfth day (before removal of the sutures).

By this method Küstner assures us that the worst and most neglected lacerations can be made to heal "without the least difficulty." We have heard similar statements made by the advocates of other methods. Those who follow the author's technique must not lose sight of the fact that they do not necessarily possess his skill and experience. Should they fail the fault is more likely theirs than Dr. Küstner's, who has done his best to teach them what he has found to be the safest road to success. On the other hand, it will be interesting to see if the author will arouse controversial statements by other authorities, especially as to the question of the primary incision.

[1] *Die individualisierende Operation der inveterirten Scheiden-Damm-Mastdarm-Risse von Otto Küstner.* Jena: G. Fischer. 1909. (Demy 8vo, pp. 36; mit 7 Tafeln und 10 Abbildungen. M. 3.50.)

THE VARICOSE SYMPTOM-COMPLEX.

To the subject of varicose veins and the associated "symptom-complex" might very well be applied the words of Huxley: its study evokes a "state of stale and flat weariness wherein man delights not nor woman either." The author of *Der Varicöse Symptomencomplex*[2] was well aware of this when he set out to cover the ground; he seems to have addressed his task a little in the spirit of the martyr, and the feeling evidently grew upon him, for he becomes almost pathetic in his preface. But of course we all know and must acknowledge the truth of his word when he points out the misery and distress and suffering that follow in the train of "bad legs." The loss of wage-earning capacity is a serious social problem the solution of which would well repay much weariness of the flesh. It is true, too, that the dermatologist, the syphilologist, and the general surgeon do take only spasmodic interest, and that not in the question as a whole. The worst of it is that Dr. NOBL'S book does not really advance the matter materially. As a painstaking record of all that has been said and speculated upon varicose veins and ulcers, and most of what has been done to or for them, the writer deserves thanks, and those who have leisure will read. But though, as he says on the cover, he has drawn upon his own researches, there really is very little in the essay that is new. How could there be?

Dr. Nobl opens with a chapter on anatomical and physiological considerations; then he skips lightly from Hippocrates to Herophilus, from Oribasius to Morgagni, from Paré to Trendelenburg, in a rapid historical "back-glance," and so to consideration of tissue changes. Which came first, the hen or the egg? degeneration or inflammation? Well, the answer to the latter question is easier after all. Sometimes one and sometimes the other. But what about "new growth"? It would seem that unless

[2] *Der Varicöse Symptomencomplex (Phlebectasie, Stauungsdermatose, Ulcus Cruris).* Von Privatdozent Dr. G. Nobl. Berlin and Vienna: Urban and Schwartzenberg. 1910. (Sup. roy. 8vo, pp. 260. Two coloured plates and 68 illustrations, some coloured. M. 10.)

he considered himself bound by his subtitle "phlebectasis" he might have given a little more latitude to the notions about the angeiomatous character of certain types of varicose vein, especially in young people. There is probably a great deal of truth in the remark that one of the most potent factors in the production of varicose ulcers is want of cleanliness; it is universal experience, at any rate, that the one condition precedent to healing is cleanliness, and the incidence of ulcer upon the poorer classes, who are not by any means the only sufferers from varicosity, points in the same direction. It is surprising to find that of nearly 50,000 cases something like 60 per cent. should be men, and that the disproportion holds up to the sixth decennium. The symptoms and course of the disease are fully and minutely described, but there is nothing that could not be matched in every surgical clinic time and time again.

When it comes to diagnosis and classification, the same old difficulties that are always cropping up meet us in these pages. The syphilitic ulcer has not always the proper site or the proper gummatous characters; the true varicose ulcer has a nasty habit of simulation, and sometimes the shield is both golden and silvern. Prevention and treatment do not take us much further than the realization that for preservation of wage earning there is no better means than the application of Unna's paste; some hardly adequate data as to recurrence after operation by various methods are given, but it is not made clear what type of veins is likely to benefit permanently by excision. In the treatment of ulcer everything is mentioned, from carbon dioxide snow to fulguration; to cleanliness, as mentioned before, proper importance is assigned, but the virtues of compression by open-wove canvass bandage, which allows discharges to escape and be washed away without disturbing the ulcer, are not apprehended in Dr. Nobl's clinic. Everybody will admire the author's courage and applaud his efforts, but the time is hardly ripe for clearing surgical craft of this reproach. It remains to be said that there is an ample bibliography, and that the illustrations are good.

TWO HOSPITAL REPORTS.

AMONG the more important contributions to the sixty-third volume of the *Guy's Hospital Reports*,[3] Dr. Herbert French's essay on Sixty-eight Cases of Pernicious Anaemia stands eminent. The series is made up of patients under observation in the hospital between the years 1891 and 1908, both inclusive, and is professedly a continuation of previous records collected by Drs. Addison, Pye-Smith, F. Taylor, and Hale White. The abstracts of the notes of the sixty-eight cases are very complete and will be valuable for reference, and the summary will prove of interest to the entire profession. Although oral sepsis was often present, some of the patients were blessed with apparently perfect teeth. Urobilin was found in urine which was by no means dark, and the colour of the urine varied "enormously" even in the same patient at different times. Retinal haemorrhages were noted in 16 patients, whilst no haemorrhages of any kind were recorded in as many as 24, so that Dr. French declares, "it is clear that pernicious anaemia may prove fatal without at any time leading to serious haemorrhage." The author also found that pigmentation within the mouth of precisely similar character to that seen in Addison's disease may occur in pernicious anaemia cases treated with arsenic. He concludes that what is called "pernicious anaemia" is very possibly only a late and almost incurable stage of a disease which, it is hoped, will some day be recognizable early enough to be cured. Dr. Bergin contributes a good study of over 300 cases of unilateral exophthalmos, recorded and unrecorded. Dr. G. H. K. MacAlister's thesis on paroxysmal haemoglobinuria is reprinted from the *Quarterly Journal of Medicine*. Drs. H. C. Cameron and J. Eyre have prepared in the bacteriological department a report on four cases of glanders in the human subject, admitted into the hospital in 1908. One recovered. Drs. Hale White and Janmahomed's article on the slow decomposition of urine in pulmonary tuberculosis, from another serial, is included in this volume. Another laboratory paper appears in the present issue, consisting of observations on the changes in the blood and bone marrow produced by experimental aniline poisoning, prepared by Drs. Price-Jones and A. E. Boycott. Surgical contributions are in the minority. Mr. Rowlands writes on the treatment of severe talipes, and Mr. W. M. Mollison on a case of congenital defect in the musculature of the abdominal wall, including a table of previously recorded instances of this malformation. Mr. Mollison dwells on the causal relation of the deficiency to obstruction before birth to the urinary outflow. The former, he insists, is by no means always the result of the latter. The last article in the volume is a good pathological essay on kidney tumours, by Dr. G. W. Nicholson, from the Gordon Laboratory; the author concludes that many at least of the so-called "hypernephromata" of the kidney are really renal and not suprarenal tumours.

The forty-fifth volume of the *St. Bartholomew's Hospital Reports*[4] includes an illustrated contribution by Dr. Adamson, the physician in charge of the skin department at the hospital, which is illustrated by excellent photographs of neurotic excoriations. The most solid piece of literary scientific work is the report on *x*-ray dermatitis presented by the committee appointed by the medical council of the hospital. The three members of the staff who formed the committee each contributes work from his own department. Mr. Rawling, as assistant surgeon, writes on the surgical aspect, and gives an abstract of thirty cases, with coloured illustrations and skiagrams. His conclusions, like those of other experts, indicate the extreme gravity of this disease; twenty-three of his own series of thirty cases were malignant. Dr. Adamson also demonstrates the dangers of the new malady, but shows that they can be warded off by precautions for the benefit of patient and operator. The danger of deeply seated organs seems to have been exaggerated; Dr. Adamson specially dwells on the brain in children treated for ringworm. Dr. Lewis Jones, in charge of the electrical department, writes on the avoidance of *x*-ray injuries. He shows that in radiography the danger lies mainly in screen examinations, whilst in radiotherapy the danger lies mainly in the duration of the exposures, which is always much longer than for radiography. Dr. Jones considers that dense gloves and other safeguards have proved sufficient protection; the operator should never make screen examinations without gloves, as it is in such procedures that he is most exposed to risk. In conclusion, he remarks that at present there is more *x* ray work done than ever. At the large hospitals the apparatus is hardly allowed time to cool from morn till eve, but happily at the present date the danger of injury to the workers is reduced to comparative insignificance by the use of suitable gloves and screens, and contrivances for fixing the tube. "Cases of chronic *x*-ray dermatitis in the early stages or of recent development are likely to become rarer." Mr. Gordon Watson, in a paper on perforation in enteric fever, includes an analysis of all the cases operated on in St. Bartholomew's Hospital down to the end of 1908; Dr. Hill writes on splenic anaemia, a monograph of high merit; and there are other contributions of importance, so that this volume is undoubtedly above the average of any single volume belonging to hospital archives of this class. The obituary notices of Sir Thomas Smith and Dr. Russell, F.R.S., will be read with deep interest by the numerous pupils of the great surgeon and the famous chemist.

THE CASE FOR THE GUARDIANS.

SIR WILLIAM CHANCE'S book, *Poor Law Reform, via Tertia*,[5] is, with a few alterations, and with an introductory chapter by Mr. Edmond Wodehouse and a final chapter on the problem of unemployment by the Rev. P. S. G. Propert, a reprint of a series of articles which appeared in the organ of the British Constitution Association during 1909. The main principles advocated by Sir Wm. Chance are those of that association, which are set out fully in an appendix. The most important of these are that the

[3] *Guy's Hospital Reports*. Edited by F. J. Steward, M.S., and Herbert French, M.D. Vol. lxiii, being vol. xlviii of the Third Series. London: J. and A. Churchill. 1909. (Demy 8vo, pp. 423.)

[4] *Saint Bartholomew's Hospital Reports*. Edited by H. Morley Fletcher, M.D., and W. McAdam Eccles, M.S., F.R.C.S. Vol. xlv. London: Smith, Elder, and Co. 1910. (Med 8vo, pp. 532.)

[5] *Poor Law Reform, via Tertia: the Case for the Guardians*. By Sir William Chance, Bart. London: P. S. King and Son. 1910. (Demy 8vo, pp. 95, with Appendix. 1s. 6d.)

Poor Law system needs reform, not in principles, but in administration; that it should be independent of municipal government; that both central and local authorities should be appointed *ad hoc*, the local authority being elected on a democratic basis, but with additional members nominated by county councils and some other authorities; that co-operation between the Poor Law and charities should be encouraged, as recommended by Mr. Goschen's Minute of 1869; and that the principles of 1832 should be strictly adhered to—that is, the principle of "less eligibility" and the workhouse test. The central point on which Sir Wm. Chance insists is that boards of guardians should be retained and the powers of the central authority extended. It is shown that many of the reforms advocated by the Royal Commission are already being carried out by some boards of guardians—for instance, the use of trained nurses in infirmaries and classification of indoor paupers. Without going to the extreme of abolishing outdoor relief, it is held that it should be restricted to the narrowest limits.

With regard to outdoor medical relief, it is held that any failure "arises mainly from the employment of part-time officers, who are often very inadequately paid for their work, and from the difficulty of getting proper home nursing, but there is nothing to show that the sick pauper is any worse off in the matter of medical attendance and nursing than the independent poor of his own class; in the infirmaries and sick wards he is indeed far better off." Fear is expressed that free medical relief to all applicants would result from the schemes of either the Majority or the Minority. "This objection," the author says, "will not appeal to the Socialist, and therefore not to the signatories of the Minority Report"; but he has far more confidence in the principle of the old Poor Law reformers that medical relief should be restricted in the same way as ordinary relief, making it "more adequate and efficient for those who require it, but rendering it less rather than more attractive to the poor." Of the Majority scheme for voluntary aid committees we read: "It is a delightful scheme—on paper—but behind it lurks compulsion and organization by Act of Parliament. Has the time come for the country to adopt this policy of despair? I say, emphatically, No." Equally strong are the strictures on the Minority Report, which "will land the country in pure and simple Socialism and universal pauperism." In the final chapter, by the Rev. P. S. Propert, on unemployment, a most gloomy view is taken of the future of the country if either the Majority or the Minority scheme were to be adopted. The Majority scheme would lead to "impoverishment not only of the Treasury but of the national character," while the Minority scheme, in familiarizing the whole community with the idea of State relief, would afford "a powerful motive for idleness and would lead eventually to social dissolution."

Whatever may be thought of these forebodings, the strong point of the book is its argument that by slightly modifying the constitution of boards of guardians and increasing the power of the central authority all the necessary reforms could be obtained without the revolutionary changes advocated by the Commission. The case for the guardians is presented in the very best light. Possibly too much stress is laid on the mere reduction of legal pauperism and too little on the prevention of poverty and disease. Probably the author's reply would be that prevention and relief ought to be in the hands of different authorities, and that he is here only immediately concerned with relief. It is a serious matter for consideration whether there would not be more danger to the State in any scheme "that shifted too many of the responsibilities of the individual on to the shoulders of the community"; but it is impossible to resist the feeling that the author advocates far too much of the old harshness of the Poor Law and has not properly realized the modern standpoint that both in medical and social matters prevention and treatment must be far more closely allied in the future than they have been under the Poor Law.

NOTES ON BOOKS.

THE *Third Appendix to Squire's Pocket Companion to the British Pharmacopoeia* has been issued. It is designed to bring that publication up to date, and also as an appendix to the eighteenth edition of Squire's larger *Companion* published in 1908. The new appendix is designed as a review of therapeutics and pharmacy from 1908 to 1910, and is divided into three parts—the first devoted to the review, the second dealing with special pharmaceutical preparations prepared by the firm of Squire and Sons, and the third giving information as to solubility, and a comparison of the standardized potent preparations of the British, United States, French, and German pharmacopoeias. The volume is a useful guide to novelties and recent advances in pharmacy. It will, we are informed, be presented free on application to members of the medical profession, and to purchasers of Squire's *Pocket Companion*, or the eighteenth edition of Squire's larger *Companion*.

The *Medical Register*[1] for 1910 reached us on March 12th. The Government supplies 1,355 copies gratis; of this number 516 are supplied to county courts, 43 to other law courts, and 356 to coroners in England and Wales; 143 copies are supplied to the sheriffs, clerks of the peace, and procurators-fiscal in Scotland, and 36 to clerks of the Crown and Peace, and 87 to coroners in Ireland. The Medical Council gave away 1,000 copies, 916 being presented to medical practitioners registered in 1909. The total number of persons registered from the beginning of registration in 1858 down to the end of 1909 was 73,000, and the number of names now remaining on the *Register* is 39,818. The number of new names added in 1909 was 1,143, and the number removed 1,688, the result being a decrease of 439 as compared with 1908, although the number is still 120 above the average of the last five years, and 5,545 above the average for the last twenty-four years. In 1899 the number on the *Register* was 35,836, and in 1889 it was 28,348. Of the total number of names removed from the *Register* this year, 713 were so removed on evidence of death, and 960 under Section XIV of the Medical Act of 1858, which requires the Registrar, in pursuance of his duty of keeping the *Register* correct, to erase the name of any registered person who fails to reply within a period of six months to a letter directed to him at an address on the *Register* inquiring whether he has ceased to practise or has changed his residence. Incidentally we may remark that the volume contains the texts of the Medical Acts and of the Dentists Act. By an Order in Council issued in 1901 reciprocity with Italy was recognized, and the degrees of Doctor of Medicine and Surgery of all the Royal Italian universities are registrable in the foreign list; the foreign list contains the names of thirty-one graduates of Italian universities. At the end of 1905 a similar order was issued as to Japan, and the degrees of Bachelor of Medicine (*Igakushi*) and Doctor of Medicine (*Igaku Hakushi*) of the Imperial University of Japan are registrable in the foreign list, but no graduate of the Japanese university has yet taken advantage of the privilege.

The *Dentists Register*[1] has also been issued; it contains 5,037 names, and includes 4 colonial and 22 foreign dentists. Of the United Kingdom dentists, 3,047, or 60.49 per cent., are licentiates or graduates in dentistry, while 16 others were registered as in *bona-fide* practice of dentistry with additional surgical qualifications on the appointed day mentioned in the Dentists Act. The number of persons registered without any additional qualifications as in *bona-fide* practice of dentistry on the appointed day is now 1,948, a percentage of 38.68, as compared with 2,043, a percentage of 40.91, in the *Register* for 1909.

The fine work on *The Birds of the British Islands*[2] by Mr. CHARLES STONHAM, C.M.G., F.R.C.S., senior surgeon to the Westminster Hospital, has now reached its fifteenth part. The illustrations are in black and white. Mr. Stonham in describing each species gives such information concerning habits and plumage as the ordinary reader will require; the plumage is described in such a manner as to enable an unskilled person to identify the bird, but minute details which tend rather to confuse than to help the ordinary reader are omitted. The description of each plate contains average measurements for the bird and a detailed description of the plumage. Measurements of the eggs are given in the text, and are in most instances quoted from Mr. Dresser. The latest fasciculus, part xv, contains admirable drawings of the plovers, of the woodcock, and of the snipes.

[1] Spottiswoode and Co., Limited. Price of *Medical Register*, 10s. 6d. *Dentists Register*, 3s. 4d.

[2] *The Birds of the British Islands.* By C. Stonham, C.M.G., F.R.C.S., F.Z.S. (In 20 parts.) Parts I to XV. Illustrations by L. M. Medland, F.Z.S. London: Grant Richards. 1906-1909. (Dbl. sup. roy. 8vo, pp. 650, plates ccl. 7s. 6d. a part.)

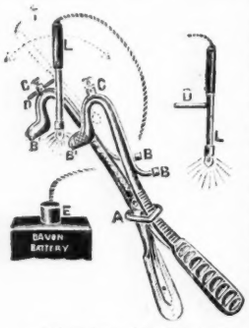
MEDICAL AND SURGICAL APPLIANCES.

Lamp for Testing Colour Vision.

A LAMP for testing colour vision has been devised by Dr. TODD, of Selby, and made by Messrs. Reynolds and Branson, Limited, of Leeds. In outward appearance it resembles the Priestley-Smith candle-lamp, which has for so long been known to ophthalmologists and surgeons. On one side is placed a bull's-eye, precisely as in this lamp, and it may be used for the same purposes. On the other side of the candle flame is a disc containing four glasses showing in succession red, blue, green, and white. The spot of light shown is $\frac{1}{8}$ in. in diameter, and it is calculated that at 12½ yards it corresponds to a distant signal 6 in. in diameter at 600 yards. The whole is in a nickel-plated case, and its price is 21s. For the testing of colour vision any lamp is better than no lamp at all, but this one is of limited use, because there are only four colours, and if any number of candidates were examined by it they would quickly realize this fact, and the order in which they were exhibited. In addition, no colour-testing apparatus is of much use unless colours can be mixed and modified in intensity by a series of neutral glasses of various densities; without these latter the majority of cases which have shortening of either end of the spectrum could not be detected.

Mouth Gag with Electric Light.

Mr. CECIL H. LEAF, F.R.C.S. (London) writes: Two difficulties with which the surgeon may have to contend when operating inside the mouth are the want of space and light. The first of these is obviated by Hewitt's ingenious device of carrying the chloroform tubes along the arms of the gag, so that a separate tube for the anaesthetic is not required, and the surgeon can therefore have all the space inside the mouth to himself. To overcome the second difficulty I have had fitted to Hewitt's gag (which, not only by virtue of its chloroform tubes, but in other respects, I consider to be the best of all mouth gags) a little electric light. This is so arranged that it can be attached to either arm of the gag, and turned to the right or left side as required, and it enables the surgeon to get a good view of the whole of the inside of the mouth. The light is supplied by the Davon battery, a handy and portable form which lasts about ten hours. Being removable it enables the whole of the gag to be sterilized by boiling. The accompanying illustration shows the main features of the gag as thus modified. Messrs. Davidson and Co., of 29, Great Portland Street, have been most successful in carrying out all my suggestions.



A, Movable ring for fixing arms of gag; BB, tubes for conveying chloroform into the mouth; B^1B, opening of chloroform tubes inside the mouth; CC, sockets with damping screws, into either of which the rod D can be placed, so that the light can be turned either to the right or left; E, connexion to Davidson's "Davon" battery.

MEDICINAL AND DIETETIC PREPARATIONS.

Whiteway's Devonshire Cyder.

WE have previously commented on the importance of cider as a rival of wines and malt liquors; in many cases in which a mildly stimulating light beverage is required the difference in cost between a good cider and a good light wine is usually considerable. We have recently had under examination samples of the "Woodbine Blend" of Devonshire cider, submitted by Messrs. H. Whiteway and Co., Ltd. (Whimple, Devon); this is a dry beverage of delicate flavour, which gave the following results on analysis:

Alcohol	6.24	per cent. (by volume).
Total solids	2.54	per cent.
Invert sugar	0.47	,,
Ash	0.24	,,
Fixed acidity, calculated as malic acid	0.10	,,
Volatile acidity, calculated as acetic acid	0.23	,,

In any case where a slightly alcoholic drink is required this cider will compare favourably with light wines.

INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

THE third International Congress on School Hygiene will be held in Paris from August 2nd to 7th, 1910. The Honorary President is the Minister of Public Instruction. Among the Honorary Vice-Presidents are Dr. Landouzy, Dean of the Faculty of Medicine of Paris, and Professor Chantemesse. The work of the congress is divided into eleven sections, in which general reports and accounts fixed by the committee will be discussed. General reports, to be discussed in the general meetings, will be presented on: 1. Uniformity of methods for physical examination in schools; 2. Sexual education; 3. The training and selection of the school doctors. The following is the programme of the various sections:

1. *Educational Buildings and Furnishings.*—(i) Hygienic conditions of school buildings; sanitary records of the schools; school baths and shower baths.

2. *Hygiene of Boarding Schools.*—(1) The best hygienic arrangements for boarding schools; health records of residential schools; hygiene in boarding schools for girls.

3. *Medical Inspection of Schools and Individual Health Records; Practical Measures for Actual Application.*—(i) The relations between the school medical inspector, teacher, home, and family doctor. (ii) Organization of medical inspection of rural schools. (iii) Who should carry out inspection of special nature in schools?

4. *Education and Physical Training.*—(i) On the usefulness of playgrounds for the scholars. (ii) School gymnastics according to age and capacity. Manual work in schools (day and residential).

5. *The Prevention of Contagious Diseases in Schools; Diseases caused by to School Attendance.*—(i) Parasitic diseases of the skin in school. (ii) Means of protecting households from contagious school diseases. (iii) The superintendence of infected children when out of school, and the conditions of their readmission to school. (iv) The teaching of prevention of malaria in schools and the protection of scholars against malaria.

6. *Out of School Hygiene; Open-air Schools; Holiday Colonies.*—(i) Open-air schools and the pupils who should benefit from them. (ii) The part played by continuation work of the scholars (associations of amient pupils, mutual help societies, friendly societies, etc.) in the hygiene of childhood and youth. (iii) Time tables and work in open-air schools.

7. *The Teaching Staff: Their Hygiene, their Relations with the Homes and the School Doctor.*—(i) Examination of physical capacity of candidates for the teaching profession. (ii) Relations of teachers to the parents and their practical aspects. (iii) Collaboration of the doctor and teacher in school hygiene.

8. *Teaching of Hygiene to Teachers, Scholars and Parents.*—(i) Teaching of infant rearing to mistresses and pupils. (ii) Temperance teaching in school. (iii) The necessity of giving teachers a sufficient knowledge of school hygiene. (iv) The teaching of domestic economy in schools.

9. *Teaching Methods and Syllabuses in Relation to School Hygiene.*—(i) Fixing of standard time tables for children of different school ages. (ii) The causes and remedies of inattention. Circumstances causing it with regard to time table arrangements and teaching methods. (iii) Advantages and disadvantages of distributing or concentrating lessons in planning time tables.

10. *Special Schools for Abnormal Children.*—(i) The various types of schools for mentally abnormal children; their advantages and disadvantages. (ii) The doctor and teacher and their collaboration in schools for the mentally defective. (iii) The time table arrangements for instruction of mentally defective children in special schools.

11. *Hygiene of Eye, Ear, Mouth, and Teeth.*

Subsection 1: Hygiene of the Eye.—Lighting of schools. Short-sighted scholars. Relations between the troubles of eyesight and school attendance.

Subsection 2: Hygiene of the Ear.—How to measure the hearing power of school children. Prevention of deafness of school children. The part of the teachers, the parents, and the school doctor in the hygiene of the ear of school children.

Subsection 3: Hygiene of the Mouth and Teeth.—Oral hygiene in residential schools. The importance of the hygiene of mouth and teeth for the preservation of the general health of children and adolescents. On half-yearly inspection and treatment of the teeth of school children.

Arrangements will be made for excursions and visits to French schools during the congress. There will also be an exhibition of school hygiene which will be open one month; it is intended to show all that has been done in regard to school hygiene in all countries and will be a true object lesson for pedagogues and school physicians for comparing the improvements realized.

Communications relative to the congress should be addressed to the general secretary, Dr. Dufestel, 10, Boulevard Magenta, Paris. Information as the exhibition may be obtained from Dr. V. H. Friedel, 41, Rue Gay-Lussac, Paris.

THE CREMATION SOCIETY OF ENGLAND.

THE annual meeting of subscribers to the Cremation Society of England was held on March 17th at the society's offices, 324, Regent Street, Sir CHARLES CAMERON being in the chair.

Report of Council.

The report of the council was presented. It stated that amongst those cremated at Woking and Golder's Green during 1909 were Mr. George Meredith, Mr. Frith, R.A., the Ven. Archdeacon H. W. Tribe, Canon Cooper, Mrs. Wilberforce, St. John Hankin, Sir G. William Des Voeux, G.C.M.G., Richard Bowdler Sharpe, Mr. Thomas Wakley, editor of the *Lancet*, and Mr. Felix Cobbold, M.P. for Ipswich.

Chairman's Address.

Sir CHARLES CAMERON, in his address, said that when one looked at the statistics of cremation in other countries the progress in Great Britain was more or less disappointing. In Germany, for example, the annual figures were four or five times as great as ours. In Paris, since the erection of the furnace at Père Lachaise, over 94,000 bodies had been incinerated within twenty years. This arose chiefly from the fact that administrative authorities in the French capital, instead of, as was done in this country, consigning the bodies with which they had to deal to the squalid indignity of a pauper's grave, submitted them to swift, decorous, and economical disintegration by means of the crematory furnace. In this country cremation had been confined to the wealthier and more intellectual classes. As to the question of cremation as a substitute for pauper burial, this society had hitherto deliberately refrained from advocating it: in the first place, because it might jar upon the feelings of a class unfamiliar with the practice, and, in the second, because the association of cremation with pauperism would, it was feared, have a tendency to prejudice against it the well-to-do classes, among which its supporters were to be found. It seemed to him a question, however, whether the practice would not very soon in this country have reached a stage where it could stand on its own merits, if it had not already done so, and whether the society might not now, without any ill effect on the progress of the movement, call the attention of local authorities to the advantages, on sentimental as well as on economic and sanitary grounds, of the practice which has already stood the test of twenty years in Paris. As to the advantages on sentimental grounds, any one who has noted the horror occasioned by disclosures as to the system of "pit" burial whenever some accident has brought it under public notice will require no argument to drive home the superiority of cremation. In point of economy cremation on a scale on which the apparatus could be kept continuously employed would be cheaper than the meanest interment, while, as to the sanitary advantages of the one practice over the other, he thought he might say without hesitation that among authorities on public health there was practically perfect unanimity on the point. In a most interesting and exhaustive paper on the progress of cremation, in the BRITISH MEDICAL JOURNAL of March 5th, he found a quotation from a recently published collection of papers by Lord Lister, which exhibited the dangers of the present system in a clear and practical form. Revelations made during the past year showed that the practice of "pit burial" still existed in different parts of the kingdom. Sir Charles Cameron himself had seen one of those noisome pits, and he remembered a case, regarding which evidence was given before a Select Committee on the Certification of Death, presided over by one of their Vice-Presidents, Sir Walter Foster. The case was that of a woman charged with poisoning her second husband. In the course of their investigations the police discovered that her first husband had also died under suspicious circumstances, and authority was obtained for the exhumation of his body. But he had been buried in a common pit somewhere in the north of England, and when a search was made it was found impossible to identify the coffin containing his body, and, so far as that point was concerned, the case fell through.

The gravest objection which its opponents were wont to urge against cremation was that while in case of death through crime or violence a buried body could be exhumed and examined, all possibility of subsequent examination was destroyed by incineration. Now the society always contended that the point at which the State should take precautions for the detection of fatalities resulting from crime was before a permit is granted for the disposal of the body. That was what had been aimed at in its rules from the very first, and that was what had been insured by the recent legislation regulating the practice of cremation in this country—legislation entailing the most stringent certification, and, in any case of doubt, the evidence of an autopsy, as the indispensable preliminary for permission to cremate. Their burial laws were, on the contrary, of the crudest description, and the certification which they provided for was little better than a farce; and as to the evidence afforded by subsequent exhumation, it was notorious that all trace of many of the most subtle and deadly poisons was rapidly destroyed by the progress of decomposition. The Cremation Society of England was not a trading association. Its object was to educate the public into the adoption of reform in the method of the disposal of the dead, which with each year's increase in the density of the population became more urgently needed. The reason for the erection of the crematory at Woking was to start the movement. For years the Woking establishment alone kept the movement alive, but at length it spread notably—within the last decade—until now they could point to thirteen different crematories within Great Britain; and the comparatively short experience of one of them proved that in London, at any rate, cremation as a business undertaking could be carried on with a good prospect of commercial success. The object of the society was not commercial but educational, although, having the Woking crematorium on their hands and being able to work it at a small profit, they saw no reason for discontinuing it. It was not surprising that a feeling had been manifested among certain members of the council that the time had come when they should endeavour to free themselves from the taint of commercialism and the attention involved in its management and endeavour to negotiate for its transfer to some purely commercial cremation company. If this could be effected, all the energies of the society could be devoted to propagandist work, which at present occupied a large portion of the time of its officials, and which had from the beginning constituted the *raison d'être* of the Cremation Society of England.

Election of Vice-Presidents.

The report and balance-sheet were adopted, and the election of Lord Ronald Sutherland-Gower, Sir L. Alma-Tadema, and Mr. W. Robinson as vice-presidents was confirmed. The retiring members of the council, Mr. F. H. Skrine and the Rev. Charles Voysey, were reappointed.

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

In recent contributions on the composition of certain secret remedies and specialities, Dr. F. Zernik[1] gives the results of his investigation of nine preparations.

Dealin Powder, a Berlin preparation, is described as an antiseptic medicament for wounds containing "a highly active oxygen combined with a dry fatty substance." On examination no dry fatty substance was found, and the "highly active oxygen" was represented by sodium perborate. The chief constituents of this preparation were: 20 parts of sodium perborate, 10 parts of boric acid, 10 parts of zinc oxide, and 60 parts of a mixture of talc with traces of starch and magnesium carbonate.

Hochfelder Pitch Plaster is advertised by the manufacturers as a porous plaster prepared with gum elastic, and as the best external medicament for the treatment of painful affections which follow cold, blows, over-exertion or other disturbances of the nervous or muscular activity. The examination showed that the preparation did not contain any pitch at all, and that its composition was similar to that of "*Collemplastrum capsicum*," a plaster, which according to an Imperial Order dated November 22nd, 1901, must not be offered for sale in drug shops. As pitch plaster is not included in this Order, the manufacturers considered that they would be safe in applying this description to the plaster.

[1] *Deut. med. Woch.*, Nos. 38 and 47, 1909.

Dr. Richter's Orudon Essence preparation has been introduced at the "Hof-Apotheke" (a pharmacy holding the right of using the affix "Court") in Elbing as a remedy for rheumatic and analogous affections. The directions for use are that the essence should be taken in doses of from 4 to 6 teaspoonfuls according to the severity of the case, diluted in a tumblerful of sugar water. It is claimed that it contains a new chemical substance —namely, *ammonium iodatum salicyl. solubl.*—as well as other ingredients which the medical profession has found to be most useful during the past decades. Among these is mentioned "*diaethyldiamin*," aromatic extract and brandy (cognac). It is sold in bottles, containing 135 c.cm., at 6s. the bottle. The fluid, which is dark brown and bitter, was found to contain ammonium salicylate and iodide, but not a trace of the "new" chemical substance, which Zernik points out has long been recognized in chemistry, piperazin, which is diaethylen-diamin and not diaethyl-diamin, as well as alcohol and some extractives and perfumes, the nature of which could not be identified. *Orudon Salt* is supposed to act well in the same conditions as the essence. A bottle of this powder costs 5s. 6d., and is stated by the manufacturers to contain basic citrate of urea (an imaginary chemical substance!), magnesium, sodium, lithium carbonate, citric acid, sodium sulphate, and extract of almonds. The analysis proved it to be a mixture of about 10 per cent. theobromine-sodio-salicylate, 10 per cent. sodium sulphate, 4 per cent. urea, 16 per cent. magnesium citrate, 4 per cent. sodium citrate, 2 per cent. lithium citrate, and fully 40 per cent. citric acid, together with a bitter extract. No trace of a substance which could correspond to the alleged basic citrate of urea was found.

J. Völlner's World-renowned Rheumatism Cotton-wool is, stated, manufactured by W. Völlner, Hamburg, London, and New York. It is claimed by the manufacturers that it produces five times as much warmth as ordinary cotton-wool, being impregnated with the finest kinds of resins. The packet costs 1s. and contains 86 grams of a cotton-wool sheet, measuring 1 cm. in thickness, 36 cm. in width, and 80 cm. in length. On analysis Zernik found that the cotton-wool was ordinary raw cotton wool, which had been superficially singed on one side and which was not even fat freed. There was nothing else in the wonderful rheumatic wool.

Epocol is advertised by a Vienna firm, as a "new, absolutely non-poisonous creosote preparation, possessing extraordinary disinfecting properties." The dose mentioned is from 1 to 10 grams a day, according to the age of the patient. No details are given with regard to the composition of the preparation, and Zernik concludes from the results of his analysis that this "new" preparation is a mixture of 45 per cent. sodium benzoate, 30 per cent. ammonium sulpho-guaiacolate, and 25 per cent. potassium sulpho-guaiacolate. The ammonium salt of sulpho-guaiacolic acid is not used in medicine, the potassium salt is used under the name of *thiocol*, while the calcium salt and the sodium salt are also used. The action of the sulpho-guaiacolates is sufficiently well known, and the claim of novelty cannot, therefore, be sustained. Zernik does not consider the preparation worth further criticism.

Limosan is vaunted as a certain cure for rheumatism, gout, and "stone." In one of the booklets accompanying the preparation testimonials galore were reproduced. It consists of white limosan tablets and greyish-green laxative tablets; 30 of the former tablets contained in a tube cost 6s., while 15 of the latter cost 6d. Several tubes are required for a course, since the patient is told to take 10 of the white and 4 or 5 of the laxative tablets daily. The composition is given as follows: Aethylenimin, 1 gram; glycocol-para-phenyledin (basic), 4.5 grams; lithium carbonate, 0.1 gram; salicylic salt, 1 gram; and acetic salt, 0.4 gram. The first-named ingredient is merely a synonym for piperazin, the second name on the list is used instead of phenocoll, while the salicylic salt has the same form as the substance usually known as salocoll. The laxative tablets are stated to contain Tinavelly senna, rhamnus purshianus, and frangula, of each 20 parts; liquorice root, rhizoma root, of each 10 parts; peppermint, marigold, and poplar tree leaf, of each 5 parts. The action, therefore, would depend on the senna, cascara sagrada, and frangula. The manufacturers have, it is stated, repeatedly been punished in courts of law for the puffing nature of the advertisements of these limosan preparations.

Oxygar is supposed to be a vegetable preparation saturated with hydrogen peroxide. The vegetable substance is agar-agar. It is supposed to contain about 10 per cent. H_2O_2, but the manufacturers call attention to the fact that the preparation loses in strength after a time. Frerichs found that fresh oxygar contained hydrogen peroxide varying in amount from 0.6 to 14.4 per cent., that the amount decreased within a short time, and after a few weeks even sank to *nil*. In cold water all the hydrogen peroxide was liberated within a few minutes. It thus appears very doubtful whether the peroxide would not be liberated in the stomach, in spite of the fact that the manufacturers claim as an advantage of the preparation that the H_2O_2 is not liberated until the intestine is reached, and then only slowly.

Victoria Asthma Drops are put up by the "Victoria Apotheke" in Berlin, and are supposed to be taken in doses of from 25 to 30 drops during an attack every half-hour, and 25 drops regularly three times a day as a preventive. The bottle contains a brownish-yellow fluid, which was found to consist of tincture of lobelia, tincture of opium, liquor ammonii anisatus, acetic ether, and potassium iodate.

Automors is a widely advertised disinfectant, prepared by Heyl Brothers and Co., Charlottenburg. The advertisements claim that it is a new, strong, and harmless disinfectant, acting five times as strongly as carbolic acid. The analysis showed it to consist of about 3 per cent. phenols and carbohydrates, about 16 per cent. phenol sulphate, with 15 per cent. of free sulphuric acid. It would appear that this is an old preparation under a new name; formerly it was known as sanatol. The free sulphuric acid content renders it not harmless but actually highly poisonous. Its disinfecting power is far weaker than that of carbolic acid, save in a very exceptional circumstance, while its claims to act against flies are also false.

In a recent number of the *Gesundheitslehrer* (No. 19, January, 1910) attention is called to this last preparation, and a paragraph is quoted from the financial magazine, the *Bank*, in which the methods of Heyl Brothers are discussed. It is alleged that this firm, which is in the hands of the family which founded it, has for the past three years been attempting to float the company on the open market. The *Bank* suggests that the extensive advertisements may be a device to raise the sale fictitiously, and that the firm hopes if it can rake in a sufficient sum to justify the statement that the dividends of the company have risen during the previous twelve months, to place the shares in other hands and clear out. If this be the scheme, it has not the merit of novelty, but might be labelled "Made in England"—or America.

MOTOR CARS FOR MEDICAL MEN.

STEAM CARS.

W. B. asks medical motorists for their experience of steam cars; what are the weak points and drawbacks to the steamer? They appear to have many good points, yet are seldom seen. "W. B." has had two petrol cars for the past four years and was never free from trouble and expense with them.

COUNTRY DOCTORS AND MOTOR CARS.

DR. F. C. WRIGHT (Moy, co. Tyrone) writes: I have read Drs. Fentem and Nicholls's letters in reply to Dr. Allan Wilson's opinion of motor cars for medical men without a chauffeur. I entirely agree with Dr. Wilson, after an experience of eight or nine years with motor bicycle and car in an altogether country district, and my opinion coincides with all other motorists with whom I come in contact. Holding the wheel is quite a minor consideration with a chauffeur at your back responsible for the running repairs, but without him your mind is wandering over every nut from the front hub to the tail lamp, and if, perchance, you do get home with a non-stop run you will possibly have to spend hours getting rigged out for next day (I do not refer to the cleaning of the car), not to speak of tyre trouble, which is an inevitable bother to every motorist, no matter how modern or up to date the type of car or tyre may be. With the enthusiasm to which motorists are susceptible, it might be possible with the great majority of chauffeur-doctors, when they get home "so quickly and into that quiet study amongst their books" referred to by Dr. Fentem, to devote much time to the study of motor defects, giving the patient secondary consideration. I shall be surprised if eventually every medical man does not become sick of the greasy mess and consequent filthy hands, and resort to the pleasures of a smart reliable cob for a night in winter. As a pleasure vehicle to those of a mechanical turn of mind the motor is quite another matter.

THE ADVANTAGES OF ONE-CYLINDER CARS.

T. H. B. writes: I entirely agree with your correspondent "T." as to the suitability of a small power one-cylinder car for many medical men. I have a 10-h.p. Cadillac car with a four-seated body, which has for the past eighteen months given the greatest satisfaction. It has required no repairs and very few adjustments, is extremely easy to start, as the engine almost always responds to one single turn of the handle. This to a doctor, who is constantly starting and stopping, is a great advantage. The petrol consumption is low—about 25 miles to the gallon being a good average. The car is a splendid hill climber, and will take all moderate hills without gear changing. The epicyclic form of gearing makes it a very easy and pleasant car to drive.

To sum up the matter, I would say that the Cadillac is built not for speed but for reliability and economical running, and if an owner is content to accept its limitations in speed and power, he will be more than satisfied with its performances. I am always able to look after the mechanism myself and have only a small boy to keep the car clean; beyond the inevitable tyre troubles, I have had no difficulties or delays.

PROFESSOR H. PERCY PICKERILL, M.B., B.D.S., Director of the Dental School and Hospital of the University of Otago, Dunedin, N.Z., informs us that the Senate of the University of New Zealand now requires medical students to produce a certificate of having attended a short course of elementary stomatology (dental surgery) before sitting for the final M.B. examination.

Nova et Vetera.

A QUINTILIAN OF THE SICK ROOM.

IN an article which appeared in the JOURNAL of March 12th we touched the fringe of a matter of the greatest importance—how a doctor should talk to his patients. We only dealt with the subject in a general way. We are pleased, therefore, to be able to refer our readers to a little book in which, in spite of the Welsh look of the author's name, the matter is handled with characteristically German exhaustiveness.[1] The author, Dr. Hughes, was moved to write on the subject by an incident which he relates as follows: "A few years ago I met in a tramcar a lady dressed in black. In the course of conversation she told me that she went once a week from a large town to a little spa to see a well-known sanitary councillor. 'Are you ill?' I asked, full of sympathy. 'Oh, no,' she answered; 'but Herr Sanitätsrat treated my child.' 'Then the child is better now?' I asked, with pleasure. 'No, unfortunately it is dead,' she answered, sadly. 'But why, in Heaven's name, do you go every week to see the Sanitätsrat?' I said, somewhat impatiently. 'Oh, he knows so well how to console me.' she replied, quietly. Ashamed of my impatience, I held my peace; I thought what a mental influence this Sanitätsrat had on his patients; how he could dominate this woman who had under his care lost her dear one." This problem our author set himself to solve, and the result is seen in the booklet under review.

We need not follow Dr. Hughes through his somewhat elaborate divisions and subdivisions, which recall the many-headed sermon constructed according to the formal rules of the older pulpit oratory. He discusses in detail the value of psychical treatment—"objective" and "subjective." The former is somewhat affectedly called "dietetics of the soul." The doctor prescribes a mental diet, telling the patient to vary his mental and bodily work. Every hour of the day is to have its appointed occupation, a due proportion being given to "rest, sleep, recreation, conversation, play, distraction, and reading." This advice is of course excellent, but it is given to few of us to be able to spare the time that would be required to carry out the recreative part of the programme. That, indeed, is the weak point of most schemes of life. The other day an eminent physician said that he had made it a rule never to work after eleven o'clock at night and never to work on Sunday—golden rules truly could one but follow them! But what is the mental diet to be prescribed to him whom the exigencies of practice, the urgency of the printer's devil, or other compelling influence, forces either to break his sleep or to prolong his vigil far into the night, and for whom Sunday is mainly a day of making up arrears of work? Even if such an one does actually snatch a few hours of rest, he is too often haunted by the limping footstep of justice which he knows will overtake him with larger demands on the following day. "Mental diet" which consists in telling one, who knows that the frightful fiend of necessity doth close behind him tread, not to worry but to rest and indulge in "distraction," is like prescribing liberal diet and generous wine to a poor creature who can scarcely afford a twopenny tramfare to seek counsel of the oracle. Some physicians will light-heartedly prescribe a long sea voyage to a young man just beginning to build up a practice, or a winter in the South to a woman with a young family which she cannot leave, and whose husband can just keep their souls and bodies together. If Dr. Hughes or anyone else would tell us how to avoid the stress of overwork, or how to woo the sleep that knits up the ravelled sleeve of care, he would confer an inestimable boon, not only on the profession, but on the countless numbers of men and women who live under the curse, "In the sweat of thy face shalt thou eat thy bread till thou return unto the ground." "Mental diet" of the kind prescribed by Dr. Hughes is a luxury reserved for the few who toil not neither do they spin, or who are in a position to get others to do so for them.

"Subjective" psychical therapy may be described as medical sermons for the sick room. These, which should, we are told, be carefully thought out, are to be directed to awakening the patient's will power. Our author is careful to warn us not to confuse the medical preachments which he includes in his system of psychical therapy with hypnotism. The former, he says, appeals to the imagination or the subconscious mind; the latter to the intellect, or to what he calls the over-consciousness, by which we take him to mean ideals. By means of hypnotism, he says, the patient's will is lulled to sleep, and surrendered to the direction of another; by the eloquence of the doctor it is intended that he should be spurred into activity. It is to be hoped, however, that the doctor's eloquence may not have the opposite effect, and we confess that we are inclined to think from some of the examples given by the author that this might possibly occur. One or two of those chosen at random will serve at once to show what he means, and to enable the reader to judge how far medical oratory is likely to serve its purpose.

First, however, some of the general principles on which it is based may be quoted. Dr. Hughes says the keynote of medical persuasiveness should be: "You can be helped, but you must do something yourself." The patient's self-love should be excited, and he should be urged to take the measures necessary to regain his health. As sick folk are not in a fit state to understand scientific explanations, the doctor's discourse should be as simple as possible. He should always strive to enter into the feelings of the patient, and should meet possible objections at the beginning of his speech, so as not to mar the effect of his arguments. Indeed, the patient's objections sometimes afford the very strongest arguments in favour of the doctor's counsel. The results of disregard of the advice given should be painted in the darkest hues, for it is often easier to move a patient by fear than by hope. But the doctor should never tell a patient that he is descending into the Valley of the Shadow of Death. It is his duty not to extinguish every spark of hope. The family, however, should be fully informed as to the situation. Here we may be allowed to interpolate a hint which we got from a physician of large experience and much worldly wisdom. Whatever had to be said to the relatives he said to them when they were gathered together; otherwise, he said, they would compare notes, and this would certainly lead to misunderstanding.

Dr. Hughes's scheme of a medical discourse is arranged as systematically as Quintilian's instructions to orators. We have the conciliation of the audience, the exordium, the various points and the peroration all complete. First, there is an introduction consisting of three subheads: The winning of the patient's confidence; the narrative of facts; and the setting forth of their significance. Then comes the argument, made up of demonstration, reasoning and the refutation of objections. Last comes the conclusion, with a recapitulation of the doctor's view on the case; a forecast of the future; and an exhortation to follow the line of treatment laid down.

One or two illustrations will suffice. A patient suffering from the consequences of drink is to be addressed as follows:

> Listen, my dear friend. You go too far. You lead an absolutely godless life. You begin drinking early in the morning; you don't come home from the public-house till 1 a.m.
>
> If you drank light beer or light wine it would not matter, but you drink the heavy wine of the South and even grog. You must not drink so much heavy stuff. From one to two litres of beer or a bottle of Rhine wine is quite enough for one day. He who cannot restrain must abstain completely and take the pledge. It is much easier to abstain altogether than to limit oneself. No reasonable man leads such a life as you do. Your position, your future, and your family require an entire change of life. When you go so far you are like Fritz Wagner, who spent his substance in a couple of years and was dead in three. It is high time for you to make a change. The first fortnight will be very hard; then, however, you will feel well and contented; you will feel better than you do now, when you live going from café to café. Pull yourself together! You will be grateful to me if you take my advice.

To a person suffering from heart disease the doctor may say:

> Now I have several times examined you thoroughly. You want to know what is the matter with you. I will tell you the truth, so that you can take proper precautions in future. Your heart is not normal. There is nothing wrong with its beating, no organic trouble, but only a weakness in the muscles, and nervous disorder of the heart. The heart is continually troubled. There is nothing to be done for it. But you must not immediately lose courage. You need not guard yourself

[1] *Aerztliche Bererdsamkeit.* Von Dr. med. Henry Hughes, pp. 59. Arzt in Bad Soden a. T. Wurzburg: Curt Kabitsch (A. Stuber's Verlag).

against every movement, but be careful what you eat, and avoid any strain. You need not always be afraid that your disease is getting worse. These maladies always get well of themselves. Just think of your friend Klaus, who three years ago was entirely unable to work, and now can do anything. Your illness will get worse if you continually brood about it. The heart needs exercise, as well as care. So be bright, and you will see how your heart will get stronger and soon regain the former strength.

An excitable lady is to be soothed in the following strain:

My dear Mrs. X., how can you get so excited over such a little thing? This happens to me sometimes. You are always so nervous and excitable. The slightest accident sends you into a passion. Your heart beats furiously, your whole body shakes, your hands tremble, you become alternately red and white, your voice becomes loud and harsh, you fly about in a distracted fashion. Then you sit down, and then leap up; you can't remain in any place; you throw everything upside down. Now you are busy with this, now with something else. You must not get so excited. It is not so hard if you put your mind to it. First, practise being quiet. Pull yourself together and keep as quiet as possible. Look at everything from a high point of view, from a religious and philosophic aspect. Do not worry over little things; they are mere trifles which are not worth it. Preserve the σωφροσύνη of the Greeks, a firm character, which is the best support against the wrongs of life. You only harm yourself by getting excited. Your heart will suffer. You will weaken your nervous system, you waste your strength. You lose self-reliance, and lose the respect of your servants. So pull yourself together! Remain quiet! Show a little dignity! You will soon see the advantages of it in your mind and body. You will feel better, happier, and able to work. A certain indifference is the best armour for this life.

It is to be feared that in many cases an excitable person, instead of preserving the σωφροσύνη of the Greeks, might be tempted to throw the nearest missile at the head of the orator.

The following is a delicate way of hinting that the patient should make his will:

There is just one thing I would like to speak about. You are so worried. I know it is about the future. You do not know what will become of your family later. So you must arrange your affairs. Not a word! You must send for your solicitor. He will come at once. Two witnesses must be present, your brother and your friend, and in a quarter of an hour you can sign your will. It is only for your peace of mind. I have always found that patients seem more at ease after making their will. You are somewhat superstitious? Two years ago, when I was very ill, I made my will. But if you continue worrying like this it will impede your recovery. So we will set about as soon as possible. Then you will feel much better, and recover quickly. I will go to the solicitor at once, so that he will come to-day.

Other allocutions of which models are given are on dissipation; on overdoing a cure; on self-denial; to a mother who has lost her child; to a young lady whose father was mad and who brooded over the probability of her inheriting the disease; to a man in fear of death; to one about to be operated on.

Many shrewd hints may be found in the little book, though its formalism and pedantry may seem a trifle ridiculous. Good as the advice is, we doubt whether English patients would be much influenced by such sermonizings. It is only fair to say, however, that the author finds the English and Americans far more easy to deal with than half-educated Germans. Notwithstanding its priggishness of tone Dr. Hughes's book is the outcome of experience, and shows that he possesses that *savoir-faire* indispensable to those who have to deal with troublesome patients and inquisitive friends. It will teach a young practitioner how to handle a patient, which is often more difficult than the treatment of a case.

Dr. Waldo recently, at an inquest at the City Coroner's Court on a man who was drowned, referred to the inadequacy of the provision for the restoration of persons recovered from the Thames. The only properly-equipped station was at Waterloo Bridge, where hot baths, hot bottles, and all other requisites for dealing with a person recovered from the water were kept in readiness. This station, however, served only a limited section of the river. He had been acquainted with several drowning cases in the neighbourhood of London Bridge, where persons had been got out of the water almost immediately—under three minutes—but were not resuscitated, although skilled persons had done everything they could with the appliances at hand. In Paris the provision on the Seine was more adequate, and there it would be considered a disgrace if a person who had been in the river not more than three minutes could not be resuscitated.

SCIENCE NOTES.

The origin of consciousness has been one of the great difficulties in the problem of evolution. Between the consciousness of existence and the mere function of existing an apparently great gulf is fixed which, according to most psychologists, is not to be bridged by any of the wonderful faculties possessed by animals, however highly organized they seem to be. Many of the familiar acts of the dog, for instance, give the impression of having their origin in some reasoning faculty; the almost inconceivably intricate, and at the same time systematic, actions of many insects give pause in ascribing them entirely to instinct. Many animal faculties are quite beyond our ken. The migration of birds has long exercised the ingenuity of naturalists to frame a working hypothesis; and this remarkable instinct is not confined to birds, for we find it in greater or less perfection throughout the whole animal kingdom. Instances of dogs and cats finding their way home from great distances are well known. Many insects have the faculty highly developed, but much further down in the scale unmistakable manifestations are frequently met with. Even that dull and pertinacious animal, the limpet, has been credited with the homing instinct and a sense or memory of direction. It would be interesting to ascertain the point of view of such a colourless creature. It spends half its days sticking, and continues to stick as if in the endeavour to immortalize itself as the symbol of pertinacity. It does allow itself a certain amount of relaxation and recreation, wandering about in quest of adventure, but regularly with the fall of the tide it finds its way back to its old hole and home and applies itself with renewed vigour to the labour of glueing itself to the rock. It is from this curious habit of returning to the same spot that we feel justified in crediting the limpet with a certain faculty of memory. Ainsworth Davis and Lloyd Morgan were the first to observe the fact and to study it experimentally. It was found that limpets removed to distances up to 20 ft. almost invariably returned to their old haunts within twenty-four or forty-eight hours, but when removed further only a small proportion returned, and it took most of those three days to perform the long journey. No satisfactory explanation could be given of the mechanism of this accurate return. Tracks on the rock were suggested, but could not be demonstrated; removal of the oral tentacles did not prevent the limpet finding its way back. More recently a lengthy series of experiments was made by Piéron, who came to the conclusion that the phenomenon could only be explained by admitting a certain muscular and locomotory memory. From his observations it is evident that the limpet has a fairly keen appreciation of environment as well as sense of direction. When it has left its hole of its own accord it invariably returns along exactly the same line. Obstacles placed in the path are successfully negotiated, and alterations along the path fail to divert the limpet from its course. Its behaviour is suggestive of a ship at sea. It has the additional sense of orientation, for when removed from its situation and allowed to return, it always takes up exactly its original position. This occurs even although radical changes are made, such as breaking the edges of the depression, or even smashing the entire site. One curious experiment is worth repeating. A limpet was removed from its site to some distance and allowed to find its way back, but meanwhile a limpet of equal size was placed on the site, where it fixed itself. When the first arrived home it seemed extremely disconcerted to encounter the intruder and wandered round and round it, as if to ascertain exactly what had happened. Having satisfied itself that there had been some high-handed act of usurpation, it laid itself against the second limpet and proceeded to push it from the spot. The second, evidently recognizing the justice of its claim, yielded not unwillingly and allowed the rightful owner to take up its abode, which it did in exactly the same position as at first. A similar homing instinct has been demonstrated in the case of several other gastropods. These observations may appear little more than trivial, unless account be taken of the very lowly organized nature of the gastropod nervous system.

An interesting article on the red or precious coral was published by Professor McIntosh in *The Zoologist*

for January. One of the most valuable of commodities, frequently worth more than its weight in gold, red coral has been sought for from time immemorial, and still continues to provide employment for numerous people in various quarters of the globe. In early times around the shores of the Mediterranean it was in great demand, not only as an object of adornment, but as a precious medicinal remedy endowed with mysterious properties. It was worn as a charm against all kinds of evil, and this superstition persists in Italy even at the present day. A great part of the miraculous attributes of red coral was due to ignorance of its origin and nature. It did not appear to be possessed of life, and yet it grew. It was not a mineral, and yet it was neither a plant nor an animal. General opinion held it to be a petrified plant. It was not until the beginning of the eighteenth century that a glimpse was got of its true nature. A young French surgeon, Peyssonnel, discovered that its formation was really due to a plant-like animal with numerous polyps—a zoophyte, in fact. His observations were received with the utmost incredulity by the French Academy of that day. A few members, amongst them the celebrated Réaumur, accepted his views, but the subject led to much wrangling, and, receiving no encouragement to continue his work, Peyssonnel left the country, never to return. The more recent work of Milne-Edwards and Lacaze-Duthiers has shown the correctness of Peyssonnel's original observations. Red coral grows on rocky ground round the shores of the Mediterranean, and is most abundant at depths of from 25 to 50 fathoms, although it may be found much deeper. It is found especially round Sicily and off the Algerian coast. It belongs to the Coelenterate group, the *Alcyonaria*, and consists of a main stem from which irregular branches are given off. Each branch bears a number of polyps, which have eight pinnate tentacular arms. The polyps are of two kinds—autozoids and siphonozoids—only the former of which are sexual. Each colony is generally unisexual, so that there are male corals and female corals. The eggs are developed internally, and the larva finds exit through the mouth of the parent. The breeding season is from May to September. Commercial red coral is the dead skeleton of the animal, which it forms around itself as a support and protection. Coral fishery in the Mediterranean is chiefly in the hands of the Italians. It is carried out in small decked boats with a crew of about ten; the life is very hard and the pay small. The fishing apparatus consists of a stout wooden cross, 3 to 6 ft. in length, having an iron centre or weighted with a stone. To the cross are attached about thirty hempen tangles. Tied to a strong rope the cross is pitched overboard and dragged along the bottom. The heavy cross breaks off the corals, which are caught by the tangles. The coral thus obtained is of very varying quality. The inferior kinds are worth only 2s. to 10s. a pound, but the better qualities fetch about £10. The choicest rose-pink coral, however, may find a market at anything up to £200 an ounce. The annual value of rough coral has been estimated at £2,000,000, but when manufactured it reaches £10,000,000. The industry finds employment for a large number of people both directly and indirectly. The assiduity with which coral fishing has been pursued has led to the exhaustion of certain "banks" or areas, giving rise to fears and complaints and agitations for restriction and a "close season," during the breeding season, but this is not possible, as it occurs in the summer months, the only time when fishing is practicable. It is found in practice that it is sufficient to give the various areas a rest in the course of a period of years. Despite its stationary nature and its limited means of dispersal the coral has a remarkable power of recuperation, so that an exhausted bank may be found after a rest of five or ten years to be richer than ever. Although the Mediterranean is the chief seat of the red coral industry there is a large fishery in Japan. It is of very ancient date, but for a long period such fishing was prohibited. When the interdict was removed in 1868, however, the industry immediately began to thrive, and on the Moroto ground at one time as many as a thousand boats were engaged. Most of the Japanese coral finds its way to Italy, some to China, and but little is retained for home use. Professor McIntosh, in concluding, draws a comparison between the coral industry and the fishing industry. He quotes from a previous utterance on the same subject:

> Nature has been able by her unaided resources to ward off extinction in a species (that is, *the red coral*) so eagerly desired by man for one of the greatest incentives—namely, pecuniary gain—and yet so circumscribed in distribution, and so slenderly supplied with means of dispersion in comparison with many marine animals. . . . If the continuance of the red coral, therefore, has been assured, what difficulty is there in regard to the permanent abundance of the chief food fishes of the open seaboard of our country—set as it is in the midst of an almost boundless ocean—with all the marvellous powers of increase (a thousand-fold greater than the coral) so characteristic of them on the one hand, and all the varied and gigantic resources of Nature in the sea at command on the other? Science as well as experience answers that there is none.

At a recent meeting of the Zoological Society Dr. Leiper exhibited some specimens of the larvae of *Trichostrongylus pergracilis* (Cobbold), which is believed to be the cause of grouse disease. This parasitic nematode has much in common with the well-known *Ankylostoma duodenale*, and its life-history follows a very similar course. The eggs are shed amongst the heather which the grouse frequent, and in a week active larvae are developed which climb up the heather in wet weather, and are there eaten by the birds. The larvae become adult and begin to produce ova in the remarkably short space of four days. Grouse disease has been a source of trouble and anxiety for many years, and several unsuccessful attempts had been made to investigate it. A few years ago a Commission was appointed to deal with the matter thoroughly, and the zoological part of the investigation was assigned to Dr. Shipley. He made a very careful study of all the parasites, both external and internal, which infect the grouse. The results are published in the *Proceedings of the Zoological Society* (1909, pp. 309–368). The parasites comprise a numerous and varied collection, consisting, as they do, of two species of bird lice, a fly, two fleas, a tick, and two mites externally, while internally there are a *Trichostrongylus*, a *Trichosoma*, a *Heterakis*, and a *Filaria* amongst the nematodes, and two species of *Davainea* and one of *Hymenolepis* amongst the cestodes.

LITERARY NOTES.

MEDICAL folklore is always interesting, as it consists largely of religious superstitions, which help to throw light on the manners and mode of the life of the people, or of remnants of practice founded on exploded or forgotten medical theories. In a recent number of the *Revue Médicale de Normandie*, Dr. Masqueray gives a number of examples of such healing methods which are still practised in Normandy, notably in the valley of the Seine and the Varenne. Thus, in cases of jaundice, no matter what may be the origin of the condition, the following remedies are believed to be efficacious. Every morning, on waking, the patient should drink a large glass of the urine of his eldest son. But, it may be asked, What is to be done if there is no son? Then one has a choice of two equally delectable methods. Apply to the pit of the stomach a living trout, which is to be kept there till it is completely putrid; or every morning, during a period of forty days, drink a large glass of plain water in which have been placed three lice taken from the back. For simple catarrhal conjunctivitis there is nothing like the application to both eyes of a slice of a newly-killed calf. For sprain, a salt herring opened in the middle is the best application. A particularly quaint remedy for ulcers of the legs is to get a virgin of eleven—the age is evidently chosen as offering a sporting chance of obtaining the genuine article—to pass water on the sores. For prolapse of the womb the local application of the hand of a man lately dead is strongly recommended, the patient meanwhile saying three *paters* and three *aves*. The tooth of a mole of the masculine gender or the tooth of a dead man carried in the purse is a good preservative against toothache. A dead mole applied to the chest during a whole day helps an infant through the troubles of teething. For the cure of meningitis a living pigeon is to be taken, torn open, and put on the patient's head; Dr. Masqueray says he has seen this done, and, as may easily be believed, it is a horrible sight. In rheumatism, that familiar remedy the potato is used, but it must be a red one, and must be carried inside the corset. One of the

oddest remedies is that recommended for nightmare; the patient should carry in a bag hung about his neck a living toad till the animal departs this life. This would in many cases be more likely to cause than to cure a nightmare, but it is to be presumed the toad acts homoeopathically. It appears that country doctors often meet with serious difficulty in dealing with peasants who insist on using methods of which these are but a few specimens.

In Mr. John Fyvie's recently published book, *Wits, Beaux, and Beauties of the Georgian Era*, there is an account of Catherine, wife of the third Duke of Queensberry, best known to students of English literature as "Gay's Duchess," because under her roof the author of the *Fables* spent his last days. She was dismissed from Court for soliciting subscriptions for her favourite's censored opera, *Polly*, within the precincts of St. James's. She was a woman of strong character, and should be held in honour by the ladies of the present day whose determination to get the suffrage has thrown a good deal of extra work on the police. In March, 1739, she headed a successful attempt to "rush" the House of Lords. Says our author:

The Duchess, with several other ladies, had been present in the gallery of the House of Lords when the merchants of London stated at the Bar of the House certain grievances which they had against the Government of Spain; but when this important matter was to be debated a day or two afterwards, the Lords unanimously resolved that ladies should be excluded and the Gallery solely reserved for members of the House of Commons. But, as we learn from one of Lady Mary Wortley Montagu's lively letters (and her account is confirmed in all essential particulars by Mrs. Delany, who was one of the actors in the scene), a party of noble dames resolved to resist so arbitrary a decree.

These heroines were Lady Huntingdon, the Duchess of Queensberry, the Duchess of Ancaster, Lady Westmoreland, Lady Cobham, Lady Charlotte Edwin, Lady Archibald Hamilton and her daughter Mrs. Scott, Mrs. Pendarves, and Lady Frances Saunderson. I am thus particular in their names, since I look upon them to be the boldest assertors, and most resigned sufferers for liberty I ever heard of. They presented themselves at the door at nine o'clock in the morning, where Sir Charles Saunderson respectfully informed them that the Chancellor had made an order against their admittance. The Duchess of Queensberry, as head of the squadron, pished at the mere ill-breeding of a lawyer, and desired him to let them upstairs privately. After some moderate refusals, he swore by G—— he would not let them in. Her Grace with a noble warmth answered by G—— they would come in, in spite of the Chancellor and the whole House. This being reported, the Peers resolved to starve them out; an order was made that the doors should not be opened till they had raised the siege. These Amazons now showed themselves qualified for the duty even of foot soldiers; they stood there till five in the afternoon . . . every now and then playing volleys of thumps, kicks, and raps against the door, with so much violence, that the speakers in the House were scarce heard. When the Lords were not to be conquered by this, the two Duchesses (very well apprised of the use of stratagems in war) commanded a dead silence of half an hour; and the Chancellor, who thought this a certain proof of their absence (the Commons being very impatient to enter) gave order for the opening of the door; upon which they all rushed in, pushed aside their competitors, and placed themselves in the front row of the gallery. They stayed there till after eleven, when the House rose; and during the debate gave applause, and showed marks of dislike, not only by smiles and winks (which have always been allowed in these cases) but by noisy laughter and apparent contempts.

Nor is the "hunger strike" a new thing; it is mentioned in Pepys's *Diary*, though, to be sure, it is only to the case of a man who threatened it that he refers. Under date May 26th, 1669, there is the following entry:

One Sir Edmund Bury Godfry, a woodmonger and Justice of Peace in Westminster, having two days since arrested Sir Alexander Frazier for about £30 in firing, the bailiffs were apprehended, committed to the porter's lodge, and there, by the King's command, the last night severely whipped; from which the Justice himself very hardly escaped (to such an unusual degree was the King moved therein). But he lies now in the lodge, justifying his act, as grounded upon the opinion of several of the Judges, and, among others, my Lord Chief Justice; which makes the King very angry with the Chief Justice, as they say; and the Justice do lie and justify his act, and says he will suffer in the cause for the people, and do refuse to receive almost any nutriment. The effects of it may be bad to the Court.

It may be added that the Alexander Frazier or Fraizer here referred to was physician-in-ordinary to Charles the Second, and greatly trusted as a political as well as a medical adviser by that shrewd monarch. Clarendon seems to have looked upon the doctor's influence with some jealousy, for he writes to Sir Richard Browne from St. Germain's:

I am glad you have so good a correspondent in Dr. Fraizer, who is grown, God knows why, an absolute stranger to me; he is great with Lord Gerard and Mr. Attorney, but he will speedily leave us and go for England, which truly I am sorry for, for the King's sake; for no doubt he is good at his business, otherwise the maddest fool alive.

At the Restoration he returned to England, and gained a degree of influence with the King, as Munk says in his *Roll of the Royal College of Physicians of London*, "unequalled, perhaps, in the history of the profession." It is more than hinted by Pepys that the secret of his influence was not merely that he was "good at his business," but that he was unscrupulous in the use of his professional skill. Under date of September 19th, 1664, the diarist writes:

Dr. Pierce tells me, when I was wondering that Fraizer should order things with the prince in that confident manner, that Fraizer is so great with my lady Castlemaine and Stewart and all the ladies of the court, in helping them to slip their calves when there is occasion, and with the great men in curing them, that he can do what he pleases with the King in spite of any man; and upon the same score with the prince—they all having more or less occasion to make use of him.

That Fraizer did not always succeed in helping the ladies to "slip their calves" opportunely may be gathered from the misadventure recorded of the lady who "slipped" one at a court ball, to the scandal even of that dissolute assembly. In the *Mémoires de Grammont* the incident is related of a coy maiden who had refused the advances of a country squire as follows:

La dedaigneuse Wasmestré, surprise apparemment pour avoir mal compté, prit la liberté d'accoucher au beau milieu de la cour.

Pepys relates the affair more circumstantially, but gives the story another heroine. Under February 2nd, 1662-63, he has the following entry:

Creed and I and Captn. Ferrers to the Parke, and there walked finely, seeing people slide, we talking all the while; and Captn. Ferrers telling me, among other Court passages, how about a month ago, at a ball at Court, a child was dropped by one of the ladies in dancing, but nobody knew who, it being taken up by somebody in their handkercher. The next morning all the Ladies of Honour appeared early at Court for their vindication, so that nobody could tell whose this mischance should be. But it seems Mrs. Wells fell sick that afternoon, and hath disappeared ever since, so that it is concluded it was her.

Again on the 17th he writes:

Mr. Pickering tells me the story is very true of a child being dropped at the ball at Court; and that the King had it in his closet a week after and did dissect it; and making great sport of it, said that in his opinion it must have been a month and three houres old; and that, whatever others think, he hath the greatest loss (it being a boy, as he says) that hath lost a subject by the business.

The *Western Morning News* in its issue of February 8th devoted an article to John Cunningham Saunders, a Devonshire surgeon, the hundredth anniversary of whose death fell upon February 9th. To his initiative was largely due the foundation of the Royal London Ophthalmic Hospital. Saunders was only 37 years of age when he died on February 9th, 1810, in Ely Place, in London. His early death was a great loss to ophthalmology. He was born at Lovistone, in Devon, on October 10th, 1773. At 17 he was apprenticed to a Barnstaple surgeon named Hill, with whom he served the usual term of five years. In due course he entered Guy's and St. Thomas's, with the latter of which he remained connected till his death. His proficiency in anatomy gained for him within a couple of years an appointment as demonstrator in St. Thomas's Hospital. During that time he had Astley Cooper as "house pupil." John Saunders made a special study of the anatomy of the ears and eyes, and the treatment of the diseases of those organs. He wrote two books: one on the *Anatomy of the Human Ear*, with a treatise on the causes of deafness, and another on *Some Practical Points relating to Diseases of the Eye*. When he helped to establish the Moorfields charity it was designed for the treatment of both ear and eye diseases. The hospital was first opened in 1805. Among those who have spent themselves in the service of humanity, and who have enriched the knowledge of the world, the name of John Saunders deserves a place of honour.

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SATURDAY, MARCH 26TH, 1910.

A POOR LAW BILL AND A CIRCULAR.

THE Prevention of Destitution Bill, for which Sir Robert Price drew first place in the ballot at the beginning of the session, has been put down for second reading on April 8th, when a debate will be raised which it is anticipated may disclose the views of the Government and of the leaders of the Opposition with regard to the proposals of the minority of the Royal Commission on the Poor Laws and Relief of Distress. The bill "to provide for the more effectual prevention of destitution and the better organization of public assistance" was issued last week; it is a very voluminous document, containing ninety-five clauses and seven schedules; an analysis of its provisions, together with the text of those clauses which directly touch medical questions, will be found in the SUPPLEMENT (p. 121). It is well drawn, covers very completely the ground it is intended to plough up in England, Wales, and Scotland, and is avowedly the bill of the minority of the Royal Commission. It is probably put forward now not because its promoters have any lively expectation that it will be carried, but as a feeler to ascertain how far and from what quarters the National Committee for the Break-up of the Poor Laws may count on support in its crusade.

The revolutionary character of the bill may be partly gathered from the fact that it proposes to repeal wholly or in part no fewer than seventy-nine Acts of Parliament, while the powers conferred by several score other Acts are to be transferred to other authorities. In its main lines it follows the recommendations of the Minority Report, notably in abolishing boards of guardians and dividing their work for the non-able-bodied among four committees of county and county borough councils, while the able-bodied are transferred to the department of a new Minister for Labour. There is a somewhat important modification of the Minority recommendation in the provisions of the bill dealing with the Registrar of Public Assistance, to whom the Minority Report proposed to give very autocratic powers of revising the decisions of the four committees. The Health Committee, for instance, after making investigations and deciding that an individual should have outdoor medical assistance, might have found its decision overruled by this single permanent official. It would seem to have been recognized that this was an impossible position in which to place any committee, for the right of appeal which the committee would have had against the decision of the registrar made the matter little better. We have several times laid stress on this point, but the justice of the objection has been repeatedly denied by supporters of the Minority Report. In the bill, however, an attempt is made to meet this objection—rather half-heartedly, it is true—by a provision that recommendations for outdoor relief "*shall be* referred" to such committee of the council, not being one of the four committees dealing with assistance, as the council may determine, and the council "*may* appoint" a special committee for the purpose called the Public Assistance Co-ordination Committee. It is still provided that the registrar should have very extensive powers, but they would not be so autocratic as those suggested by the Minority Report. The fact nevertheless remains that no question is more frequently a matter of dispute than whether a particular person shall receive outdoor or institutional relief, and in the future painted by the bill it would undoubtedly be quite a common thing for the Education and Health Committees to find the Co-ordination Committee refusing to grant them the certificates for home relief which they desire, and the dispute would have to be settled by the whole council. All this procedure is simply an attempt to get out of a self-created difficulty; the work of relief is first split up among four committees, which of itself creates more overlapping than exists at present, and to remedy this another special committee has to be appointed. In this way the possibility of serious disputes between the five committees would certainly be introduced, and the council would have finally to be called in to settle differences which would never have arisen if relief had been in the hands of one authority from the first.

There are numerous indications throughout the bill that it is only intended as a first instalment, leading up to a still greater extension of the scope of public assistance. In addition to providing assistance for the destitute, it provides that the councils shall "take such steps as seem to them desirable, within the powers conferred upon them by Parliament, as far as possible to prevent or arrest the operation of the causes of destitution." Even the causes of unemployment are specially mentioned, and "any other cause of destitution" must be dealt with by the councils. This opens out a field of work practically illimitable. For instance, the Minority Report mentions among the causes of destitution boy and girl labour, and recommends that boys and girls up to the age of 18 shall not be allowed to work over thirty hours a week—that is, half time—and shall be obliged to attend, between the ages of 15 and 18, schools for physical and technological training, such training being "provided by the community itself." Now the bill defines a "child of school age" as "a person under 18 years of age attending or being, under any statute or by-law for the time being in force, liable to attend at a school or other educational institution.' This means free education up to the age of 18, not only for the destitute, but for all persons; the want of such education is held by the Minority to be a "cause of destitution," which the council has to deal with.

Again, the Minority Report, in dealing with old age pensions, says that "it will be requisite at the earliest possible date to lower the pensionable age to 65, if not to 60." It is, however, unlikely that this will be done by any amendment of the Old Age Pensions Act for many years to come, if ever; the bill gets over this obstacle by providing, not only for the reduction of the pensionable age, but that a still greater extension of pensions may be brought about out of the local rates for "persons not entitled to pensions under the Old Age Pensions Act of 1908." This would amount, we venture to submit, to the establishment of invalidity pensions wholly out of the rates, though Germany and other Continental countries are content with a State subsidy, and demand that workers should themselves contribute towards an insurance premium for invalidity pensions. It is no wonder that the Minority in its report objected to all insurance schemes for sickness and invalidity pensions, if it intended to provide them

free; the idea of encouraging thrift and self-providence, as under the German scheme, is entirely absent from the bill in this connexion.

In addition to all the other duties with which Health Committees are endowed, they would be required to provide general relief, food, clothing, and lodging for infants below school age; for the sick and infirm and the aged in institutions; to deal with all the infinite number of causes that lead to destitution among these classes, and to provide medical assistance for all classes; in the fourth schedule of the bill is given a list of about forty Acts of Parliament which the Health Committee would have to administer. In every sense of the word it would be a destitution authority for certain classes. A novel provision of the bill which might sometimes prove useful is that the Health Committee would be expected to spend each year at least a certain amount of money, termed the "National minimum of health expenditure," to be determined by the Local Government Board for the whole country as being "the least sum at which under the most favourable circumstances a council can possibly discharge efficiently the duties laid upon them." Parliament is asked to set aside a sum not exceeding £4,000,000 a year for the first seven years, out of which grants would be made for Health Committees, but no grant would be made to any council that had not by its health department spent an amount equal to the national minimum of health expenditure. In addition, the Local Government Board would be empowered to fix a "standard average health-rate," and if the expenses of any Health Committee should not be met by the levy of a rate equal to this standard, the Exchequer would contribute the deficiency. This is called the "primary health grant," and after all primary grants needed by councils had been given, the surplus of the four millions sterling would be used for secondary grants to councils that had received no primary grants. The object of all this, according to a sketch of the bill for which we have to thank Mrs. Sidney Webb, is "to enable even the poorest local body to bring its administration up to the prescribed minimum standard without incurring more than the average rate, and so as to encourage and assist the more energetic councils to be continually increasing the efficiency of their service without undue burden on the ratepayers." It is very doubtful whether the sum of £4,000,000 would go far towards providing for the extra training of children under the proposed new definition of "school age," for the local pensions, for the whole medical service, and all the work entailed in preventing the causes of destitution, but the plan is ingeniously contrived to lull the fears of the ratepayers.

The scheme contained in the bill for unemployment insurance, with a State subsidy to trades unions, would not be compulsory; it does not include unemployment caused by sickness and invalidity, but only that arising from slackness of trade, and, with this single exception, there is not the least attempt to encourage self-providence. On the contrary, the recovery by the registrar of the cost of medical treatment would involve no inquiry before treatment was given, though the experience of every medical man as well as the experience of public authorities in the past shows that inquiry after treatment is often a farce, attempts to recover being generally not worth the trouble and legal costs. The bill, in short, proposes an enormous extension of public medical assistance, not only to the destitute, but to all persons who may, by any stretch of imagination, be thought to be in danger of becoming destitute in the future, from any cause whatever, including even their own thriftlessness. Far more reasonable are th recommendations of the Special Poor Law Committee of the British Medical Association, which deal separately with every class of the non-able-bodied, and suggest that certain classes should have free medical aid in the interests of the community; that for other classes, not needing instant and immediate relief, there should be inquiry before relief, to determine whether relief at the public cost should be refused altogether; and for others, where immediate treatment is urgent, inquiry after treatment, with recovery of cost where possible.

The Local Government Board Circular to Boards of Guardians, the tenor of which is fully stated in the Supplement (p. 123), stands out in strong contrast to the Minority Report bill. The circular rightly says that a person may be destitute, not in the sense that he is entirely devoid of the means of subsistence, but that he is unable to provide a particular form of medical attendance or treatment of which he is in urgent need. It points out also that it is not in the interests of the community that such relief should be given as discourages the recipient from striving to regain his independence, or induces others to relax their efforts to maintain their independence. The guardians are reminded, as the Minority Commissioners might well be reminded, that the rates are raised compulsorily, and not by voluntary contribution, and that the authorities are therefore not in a position to dispense charity at will. It is also pointed out that outdoor relief must be adequate to meet the need, but there must be a close and careful supervision of all outdoor cases, full regard being paid to sanitary conditions and close co-operation with the sanitary authorities. Relieving officers are to be sufficient in number and chosen for their experience, and the case-paper system and the general abolition of pay stations are strongly recommended. Co-operation with charitable associations is specially urged on the lines of Mr. Goschen's Minute of 1869. The guardians are also urged to avoid all action which might discourage self-providence against sickness, and the Board promises to give its support to any proposals intended to secure efficient co-operation between charity and the Poor Law.

In short the circular is intended to show that essential reforms may be attained by existing machinery without the revolutionary methods of the Minority Report bill. The bill is the bill of a party that speaks with some disdain of the "irresponsible committees of benevolent amateurs" of the Majority scheme; the circular promises active support to all schemes of co-operation with charitable associations. The bill would finally destroy the guardians, its supporters having already damned them with faint praise, and would set up in their place an intricate and untried machinery including four local destitution committees with a fifth committee to keep them in order, and a new Minister for Labour with six new Government departments under him. The circular admits the faults of the guardians, but suggests feasible methods for reform and the improvement of their work. The bill seems to blame environment for everything, but neglects personal thriftlessness; the circular, while helping all the destitute, would discourage parasites on society. The bill is a brand-new scheme for a completely new engine; while the circular speeds up a working machine.

THE SENSORY PRODROMES OF EPILEPSY.

THE first three numbers of *Epilepsia*, an international quarterly review whose appearance has been already noticed, contain three contributions by Dr. L. J. J. Muskens, of Amsterdam, upon the prodromes, and especially upon the sensory prodromes, of epilepsy. References to Dr. Muskens's observations are to be found in recent works on epilepsy, but, inasmuch as these appear now to have been confirmed by other investigators, and because the phenomena he describes may prove to be, not only of diagnostic importance, but may also, as he maintains, afford valuable indications for treatment, it may be well to give a brief account of the main facts.

In 1902 Dr. Muskens published a paper on the segmental disturbances of sensation in tabetics and epileptics[1] which contained the results of investigations which had extended over five years. He showed, first, that in tabetics—even, in some cases, long before any other signs had shown themselves—a diminished or delayed pain sensibility was present over certain cutaneous areas, most commonly those served by the first, second, third, and fourth dorsal, and in the lower extremities by the fifth lumbar and first sacral nerves; and, secondly, that in epileptics a varying degree of analgesia, ranging from slight hypalgesia to complete analgesia, was to be found over these same areas for some hours or days immediately preceding the attacks, and disappearing, or being replaced by the opposite condition of hyperalgesia over the same areas, immediately after the attacks. Another point which he mentioned in that article, and to which he again refers in his more recent contributions, was that the limiting lines of contiguous skin areas supplied by segments which are not contiguous in the spinal cord—the "mesial lines" of Sherrington—retain a certain amount of sensibility even during complete analgesia of the rest of the body, and that after an epileptic attack these lines were the first to become sensible to pain. Lastly, and to complete this account of the author's original statement, he showed that in tabes dorsalis and in epilepsy there were certain areas which remained unaffected during a general analgesia—namely, the periocular field corresponding to the upper part of the area supplied by the second division of the trigeminus; an area including the ball of the thumb and extending to the styloid process of the radius, and a corresponding area on the sole of the foot.

It would take us altogether too far to follow Dr. Muskens in his discussion of the bearing of these pre-epileptic sensory phenomena upon the mechanism of convulsive seizures and the question of the cortical representation of skin areas—a belief for which Dr. Muskens claims support from recent anatomical researches by Benedict, Straüssler, Balint, Russel and Horsley, and Mills and Weissenburg. It need only be mentioned in passing that these analgesic areas have been found to be present as constant permanent features in diabetes and severe anaemia as well as in metasyphilitic diseases, and as chronic but removable features in alcoholic neuritis. We are here only concerned with the empiric fact of their frequent and fluctuating appearance in epilepsy. With regard to their frequency, Dr. Muskens himself found sensory prodromes of all kinds, including the epileptic headache, in only 44 per cent. of his cases during the four years 1903–1906. Drs. Maes and Claude,[2] however, as the result of a careful systematic examination of an unselected group of epileptics, found the prodromal disturbances of sensation in no less than 80 per cent. of their cases, and there seems to be no doubt that Dr. Muskens was justified in his first contention that post-axial segmental analgesia is a much more common prodromal occurrence than is generally supposed.

Early in his investigations of these phenomena Dr. Muskens was struck by the fact that wherever these disturbances of sensibility were absent, other prodromal symptoms—motor, vasomotor, or somatic—were present, and this fact became of first importance from the point of view of treatment; for, though he does not explicitly state that he considers the several prodromes to be interchangeable, this fact led to the attempt to promote the epileptic discharge along some other track than that of a convulsive attack. The results of treatment with this view have, he says, been entirely successful, the means adopted being the administration of extra doses of the bromides on the first appearance of the sensory prodromes, rest in bed, and drastic evacuation of the intestines. The result of this treatment has always been to diminish the extent of the sensory disturbances and to lessen the proneness to the attacks, a sudden evacuation of the bowel, even where there was no constipation, being regarded by Dr. Muskens as a specific means of bringing about a harmless discharge. These observations have been confirmed by Maes and Claude.

Dr. Muskens claims for these sensory disturbances a definite diagnostic as well as therapeutic value. The fact that in a general epileptic analgesia the sensibility of the periocular and certain other cutaneous areas remains intact sharply distinguishes these from hysterical anaesthesias. He, indeed, goes still further, and contends that only such sudden and pathological phenomena are truly epileptic discharges as cause the segmental disturbances of sensation to disappear. This is true, he says, of major epileptic attacks, of series of motor fits, and of convulsions without loss of consciousness, but it does not hold good for *petit mal* and psychical disturbances. Dr. Muskens therefore considers that the clinical significance of these latter disturbances is entirely different from that of motor discharges, an opinion to which the usual inefficacy of bromide treatment in *petit mal* and psychical disorders lends support.

It remains to be seen to what extent the observations of Muskens, Maes, and Claude will be confirmed by other investigators; but if it be proved that it is possible to foretell by some days the occurrence of convulsive seizures in the subjects of major epilepsy, to mitigate or even avert these attacks, and to vary the treatment according to the indications afforded by these sensory prodromes in such a way as to avoid the unpleasant effects—as, for example, bromide acne—of drug treatment, it is evident that we have here a fact of considerable therapeutic importance.

[1] Studien über segmentale Schmerzgefühlsstorungen an Tabetischen und Epileptischen. By L. J. J. Muskens. *Arch. f. Psychiat.*, Bd. 36 Hft. 2. 1902.

[2] D. Maes and H. Claude. *Annales d'Electrobiologie*. 1907. (F.4.5.)

THE DEFINITION OF AN ACCIDENT.

A DECISION of far-reaching importance was given by the House of Lords on March 14th, the decision being arrived at by a majority of three to two. A report of the judgements will be found at p. 787. A man was employed in screwing bolts to make a condenser bath. While so engaged he fell dead. On *post-mortem*

examination it was found that he had suffered from a large aneurysm of the aorta, and that death resulted from its rupture. It was stated that the aneurysm was so far advanced that it might have burst during sleep, and under any trifling exertion was likely to do so. That the man died from injury was clear, and he was engaged in his employment when it happened. Was it an "accident arising out of his employment"? The county court judge and the Court of Appeal decided that it was. This decision was appealed to the House of Lords. The Lord Chancellor and the majority have held that there was evidence to justify the finding given in the lower courts. What occurred was fortuitous and unexpected so far as the workman was concerned, although to one knowing all the conditions it was a likely result of his engaging in work. The dissenting judges held that if the external conditions which surround and the external influences which act upon a workman at the time of an injury are normal, if it is not shown that anything unlooked-for occurred in relation to the work, and if the physical state of the workman is such that those acquainted with it and capable of judging would regard such an injury as the likely result of his engaging in the work, then it cannot be said that there is evidence to justify a finding that the injury is due to "accident arising out of the employment."

Most medical men would consider that a man suffering from an aortic aneurysm should not have been employed in any work, however light, which would entail the slightest strain or exertion. But the man was unaware that he was suffering from a disease which at any time might prove fatal, whether he was at work or at rest. In these circumstances the finding of the majority appears justifiable, although it may involve consequences which the Legislature did not foresee or intend when the Act was passed. In any case the decision is now binding, and will probably have very important effects on the relations between employers and employees. Employers of labour may find themselves compelled to discharge, or refuse employment to men who are suffering from ailments which may appear to be trifling, but which, by the nature of the employment, render them liable to accident in the course of the employment as now defined within the meaning of the Act. As Lord Shaw, one of the dissenting judges, said, the decision arrived at by the majority adds a new peril to those workmen who, notwithstanding debility and chronic disease, are anxious and willing to work in order to gain a livelihood, but are unable on this account to obtain employment.

The decision may not affect the insurance companies very materially; they will simply increase their premiums. But to hold an employer responsible in the circumstances above stated seems to make the preliminary medical examination of workmen a virtual necessity. It is pointed out by a member of Lloyd's in the *Times* of March 18th that already one of the largest insurance agents of Lloyd's has suggested that two rates shall be quoted to employers—one for cases in which the men are all medically examined and the weak ones rejected, and another rate considerably higher where no such examination takes place. What employer will take a weak man into his service if he can get a strong man for the same wages?

These be some of the consequences of the Workmen's Compensation Act to which its early supporters persistently shut their eyes.

THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The presidency of the Royal College of Physicians of London is an annual office, the statute providing that the election shall take place on the day after Palm Sunday. It has always been customary, however, to re-elect the president for several years in succession, the usual period being five years. It therefore excited no surprise when Sir Richard Douglas Powell, who has held office since 1905, intimated his desire not to be re-elected. Any Fellow of ten years' standing is eligible for election to the presidency; no nominations are made, but each Fellow present writes down and places in the urn the name of the Fellow for whom he votes. If the name of one Fellow be thus placed in the urn by two-thirds of the Fellows present he is elected, but on the occasion of the election of a new president this seldom occurs, and the two names having the highest numbers are then balloted for, an absolute majority deciding. On the present occasion a far larger number of votes were cast at the first ballot for Sir Thomas Barlow than for any other Fellow, and at the second ballot he was elected by a very large majority. In a few well-chosen words he thanked the College for the honour it had done him, and promised to give his best services to the maintenance of its honour and dignity and to the advancement of the great interests confided to it in the body politic. We venture to express the confident belief that this promise will be fulfilled, for Sir Thomas Barlow adds to a loyal affection for his College a broad outlook on public affairs and a high ideal of the part the medical profession can and ought to play in them, which will ensure that so far as his influence extends—and by his election it is of necessity much increased—it shall be worthy of its great traditions. He takes office at a critical moment, when on two great questions the profession needs statesmanlike guidance. The one is the relation in which the Royal Colleges and the teaching institutions of London should stand towards the University of London with a view of improving the opportunities for education and research in the metropolis, and of placing within the reach of medical students educated there a degree in medicine. The other is the vast problem of Poor Law reform—the reorganization of the system of preventing disease, and of giving medical relief to the sick and aged. To both questions Sir Thomas Barlow has already given much attention. Thus he brings to the discharge of the duties of his high office the prestige of a great scientific reputation, combined with a knowledge of affairs and practical sympathy with movements for the welfare of the people.

AN EXPERIMENT IN VENTILATION.

The report for 1909 of that excellent institution, the Yarrow Home for Convalescent Ch dren of the Better Class at Broadstairs, contains a note on a series of experiments in connexion with the heating and ventilation of the home, which is at once a proof of the close interest which the founder, Mr. Yarrow, continues to take in every detail, and an interesting and even amusing contribution to the great and perplexing question of the ventilation of rooms and wards. It appears that when the home was erected a somewhat elaborate system of heating and ventilation was introduced, of a type very familiar in hospitals and public institutions. The idea was to warm the air by bringing it in from outside over numerous radiators, and to extract it by horizontal air ducts in the ceilings of the rooms, communicating

at each end of the building with tall ventilating upcast air shafts. The ventilation did not prove satisfactory, and among other evidences of its defective nature was the occurrence of small epidemics of sore throat; it was established that in some instances the sore throats did not spread from person to person, but broke out in different wards whose inmates had not been in contact. Attention was first directed to the radiators, and it was found that they very soon became covered with dust brought by the in-coming air; as in so many other establishments, some of these radiators were fixed in positions which made it impossible to clean them efficiently, or their design was such that it was impossible to get brushes between the heating tubes. Mr. Yarrow came to the conclusion that a good radiator should be of such a design and so placed that it could be cleaned and dusted daily with facility, and further, that it should consist of polished tubes, rendering any deposit of dust easily visible, and stimulating servants, if they took any pride in their work, to keep the polished surfaces in creditable condition. Instead of introducing new radiators, however, the inlets were closed so that the stream of dust-laden air no longer passed over them. Attention was then turned to the extraction system, and it was found that the difference of temperature between the air in the air ducts and outside the building was so small that the current was sluggish, and consequently easily reversed. Mr. John Sampson, a member of the committee of management, showed by experiment that wind striking the building on one side had a tendency to increase the pressure of air in the rooms on that side, and to diminish the pressure in the rooms on the opposite side, with the result that in these latter rooms there was a tendency for the system of ventilation to be upset, causing the passages intended as upcasts to act as downcasts. It was found that when there was no wind the ventilation acted perfectly and as was intended, but when even a slight wind arose, and at Broadstairs the atmosphere is seldom still, the air, instead of passing away through the extraction passages, was drawn down, owing to the reduced air pressure, into the rooms on the sides of the building opposite to the direction in which the wind was blowing. The air ducts and shafts could not be cleaned, and were known to be full of dust, which was suspected to be full of objectionable organisms. Under the supervision of Dr. Bertram Dawson, honorary physician, and of Dr. E. G. Moon, one of the medical officers at Broadstairs, some interesting bacteriological experiments were carried out by Dr. Adler. Two plates were exposed for five minutes beneath the air-shaft in the ceiling of one of the wards, the medium on the one being placed so that it looked upwards towards the opening, and the medium on the other so that it looked downwards towards the floor. Plates were also exposed within the air-shafts and on the beds in the ward. The plates within the air-shaft, and the plate immediately beneath it, the culture medium on which looked upwards, both showed a rich growth of organisms, whereas the plate under the air-shaft, the medium on which looked downwards, was comparatively free. The plates upon the beds showed only a few colonies. Among the rich groups of organisms found on the plates near the air-shaft were many pathogenic varieties, including staphylococci and the *Micrococcus catarrhalis*, whereas on the plates remote from the air-shaft the pathogenic organisms were exceedingly few. The fact that the plate near the air-shaft which looked upwards was richly covered with organisms, whereas the plate which looked downwards showed very few, proved that the air was travelling into the room through the so-called outlet, and this conclusion was confirmed by the fact that the plates inside the shaft contained the same varieties of organisms as the plate immediately beneath the opening. The experiment was repeated in another ward after the air-shaft in the ceiling had been blocked up, and the plates in every instance showed only a feeble growth of micro-organisms: it was clear that the air in the ward was a great deal purer when the so-called ventilating outlet in the ceiling was blocked up. A further objection to the system was found in the fact that the various extracting shafts were in close juxtaposition, so that when a down-draught occurred the air of one ward could be carried into another. The ventilating openings in the ceilings were accordingly closed, the beds were removed from the sides of the dormitories and placed in the centre, and all the windows were always kept slightly open, so that the ventilation of each dormitory depended entirely upon the passage of air across the rooms entering on the side on which the wind blew and finding exit on the opposite side. It was considered that this would be both a simple and efficient means of continuously changing the air, for, at Broadstairs at any rate, there is nearly always more or less breeze. Since these reforms there has been a very appreciable reduction in the number of sore throats, and of the few cases which have occurred, all have been in children with adenoids and enlarged tonsils, or in others who had suffered from repeated sore throats at home. One case of measles and two of chicken-pox occurred, but there was no spread of infection as had been formerly experienced. The medical report concludes by stating that the investigation shows once more that all air-shafts are dangerous unless they are so big and so situated that they can be easily and regularly flushed with water. Unless this can be done the air-shafts collect more and more dust, and the air which passes along them into the ward or room become increasingly dust-laden, and therefore microbe-laden.

THE ASEPTICITY OF BREAD.

IN a recent annotation urging the advantage of machine-made bread,[1] the conclusions of the report of M. Laveran on the question of the possibility of bread containing live tubercle bacilli derived from consumptive workmen were quoted and the reassuring effect of his conclusions noted. These were based upon the work of Dr. Aucké of Bordeaux, who had incorporated tuberculous sputa in the dough of loaves of different size, and found that in every instance the bacilli had lost their virulence after baking. Dr. Aucké has now extended his observations to other microbes, and has communicated his results to the Biological Society of Bordeaux.[2] He has experimented by introducing into the dough active cultures in bouillon of the *B. typhosus*, *B. paratyphosus*, *B. dysentericus* (Shiga), *B. dysentericus* (Flexner), *B. coli*, *Streptococcus pyogenes*, *Staphylococcus aureus*, and a variety of *proteus*. In all these cases the results were negative—that is to say, culture media sown with fragments of the bread taken from the parts inoculated (indicated by the litmus stain with which each of the cultures had been tinted) remained sterile, a result which was proved not to be due to any reaction of the media modified by the acidity of the bread, as when sown with pure cultures all the tubes grew abundantly, and in fact the reaction of the bouillon remained slightly alkaline. He thinks it possible that microbes which have great resistance to heat, such as the tetanus bacillus, may not give the same

[1] BRITISH MEDICAL JOURNAL, February 12th, 1910, p. 400.
[2] *La semaine médicale*, 1910, No. 9, XXXV.

result, and he considers the point worth investigation; but so far as the above organisms are concerned, he believes that they are completely destroyed in the process of baking, and that apart from any accidental contamination of the surface after it has left the oven, bread may be considered to be a thoroughly aseptic article of diet.

THE ARMY HORSING SCHEME.

It is estimated that the number of horses which would be required by the army on a general mobilization would be about 200,000, and the Secretary of State for War has issued a scheme for providing a sufficient reserve of trained horses. The fundamental idea of the scheme is that the War Office should supply a horse, to ride or drive, to any suitable person who has a use for the animal, the main conditions being that the animal should be baited and properly taken care of, and held in readiness in case of mobilization. The horse will remain the property of the Crown, must be at all times open to inspection, and must be kept at the address named. The allottee must properly feed and care for it, and keep it shod at his own expense, but may use it for any legitimate purpose, riding or draught, but not for carting heavy loads, for ploughing, or for any other work which the commanding officer may deem likely to interfere with its military efficiency. It must not be let out on hire, and in case of death or accident to the horse due to circumstances which in the opinion of the Army Council have arisen out of neglect or improper treatment, the allottee will be liable to pay such compensation, not exceeding £40, as may be fixed by the Council. The allottee must take out at his own expense, in the name of the Secretary of State for War, a policy of insurance for £40 against the death of the horse from accident or disease, including death from, or on account of, glanders or other infectious disease. The horse must be given up to the military authorities when considered by them no longer suitable for military requirements, if claimed for mobilization, or if in the opinion of the officer commanding it is not keeping in good condition; the allottee may be required to place the horse at the disposal of the military authorities for a period not exceeding one month in each year for military training, subject to not less than fourteen days' notice. The allottee will have one month from the date of the receipt of the horse to decide whether he will retain it or not, and at the expiration of the month the allotment will continue for twelve months certain, but may afterwards be determined by one calendar month's notice on either side. The allottee will not be entitled to retain the horse if demanded by the Army Council, but if it is demanded, though not on the grounds expressed above, the allottee will be entitled to such compensation as may be fixed by the Army Council. The conditions seem reasonable, and there may be many doctors, especially in the country, who will be glad to obtain a second horse on the terms mentioned; an official circular setting them out in full can, we understand, be obtained on application to the Army Council.

CALCIUM CHLORIDE IN ALBUMINURIA.

The use of calcium chloride in the treatment of albuminuria has been advocated for some time, and three years ago Iscovesco showed that in cases of nephritis calcium salts caused a considerable diminution in the albumen, but not entire disappearance. He suggested that the beneficial action of milk diet was possibly due in part to the calcium which it contains. Shortly afterwards Rénon treated several cases with daily doses of 0.1 to 0.5 gram of calcium chloride over a considerable period. In a quarter of the cases the albumen completely disappeared, without any alteration in diet or occupation, even in cases in which a restricted diet had previously entirely failed to reduce the albumen. In half the cases there was a distinct reduction in the albumen. In the remainder there was no apparent change, and in a few isolated cases there was an increase. Calcium chloride has in addition a marked diuretic effect, which is maintained for some considerable time after administration has ceased. This has recently been the subject of some observation by Imbert and Bounamour, who have shown that the continued increased urine excretion is independent of any concomitant alteration in diet or manner of life. A more important result, however, in their estimation is that the excretion of chlorides is increased out of all proportion to the minimal doses administered, and continues for at least a fortnight after the treatment has been stopped. With regard to the albumen, they consider that the action of calcium chloride is very variable. From a clinical point of view, their results seem to suggest the advisability of administering small doses of chloride, preferably calcium chloride, in such cases instead of restricting the patient to a practically chloride-free diet.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The members and friends of the Irish Medical Schools and Graduates' Association dined together on March 17th at the Hotel Cecil, with the President of the Association, Sir Alfred Keogh, in the chair. The Chairman of the Council (Dr. T. Hobbs Crampton), introduced Dr. Alfred Sheridan to the Chairman, and announced that the Council had awarded the Arnott Memorial Medal to Dr. Sheridan for an act of heroism, thus described in the annual report of the Council: "On August 24th, 1909, at 2 p.m., Mr. O'Neil was bathing in the sea near Westport, co. Mayo, when he became exhausted and sank. Some children who were looking on became frightened and gave the alarm, bringing to the beach Dr. Sheridan. The children, however, could only vaguely indicate where Mr. O'Neil had sunk. Dr. Sheridan had to locate him by diving; he eventually found him floating away on the tide midway between the surface of the water and the bottom. With considerable difficulty Dr. Sheridan brought him ashore, and after about an hour's strenuous work, he had him out of danger." The Chairman, in handing the medal to Dr. Sheridan, declared that the association was proud of him. The toast of "Our Defenders" was proposed by Mr. Robert Thompson, M.P., and acknowledged by Sir Charles Cuffe. Dr. Macnaughton-Jones, in proposing the toast of "Our Guests," praised Sir William Church for his efforts in forming the Royal Society of Medicine, and presented him with a shamrock set in glass as a memento of the occasion. Sir William Church, in replying, thanked Dr. Macnaughton-Jones for his assistance in setting on foot the Royal Society of Medicine. Dr. Seymour Taylor, in an eloquent speech, submitted the toast of "The Association," and the Chairman, in responding to it, said that the Irish doctors in England had a distinct grievance in that they were excluded from hospital appointments in this country simply and solely because of their Irish degrees. That was not right, and he believed that Englishmen in the end would see that the injustice was remedied. The

pleasure of the company was enhanced by songs, and Mr. G. W. Dawson and Dr. William Douglas, Honorary Secretaries, received congratulations on the success of the evening.

VACCINE LYMPH IN THE TROPICS.

PROFESSOR L. VOIGT, of Hamburg, has recently made a series of investigations and observations on the production of active cow-pox lymph through the medium of the dromedary.[1] The exposure of glycerinated calf lymph to a temperature of 55° C. for even half an hour was found to render the lymph wholly or partially inoperative, and other preparations of lymph gave no better results. Professor Voigt mentions various methods which have been adopted to overcome this difficulty in the form of special packages of more or less non-heat conducting materials, but these are by no means reliable or successful. Living bearers of the vaccine lymph in the tropical zones have been found satisfactory. In the interior of the German African colonies it is not easy to make use of the calf for this purpose, and it was for this reason that Professor Voigt tested the efficacy of lymph derived by transmission through the dromedary. By permission of Mr. Carl Hagenbeck he was able to make use of two dromedaries in the Zoological Gardens at Hamburg. He made a series of careful comparisons of the results obtained by vaccinations with ordinary calf lymph and with lymph taken from vesicles on the dromedary, and found them practically identical; in some cases even better results followed the use of the latter strains. The lymph was effective both as regards primary vaccination and revaccination. His observations show that the dromedary is in no way detrimentally affected during the process, and Professor Voigt is confident that the animal may be utilized as a bearer of vaccine lymph in the interior of the African colonies. The paper is illustrated by six photographic reproductions showing the nature of his experiments and a comparison of the vesicles obtained by vaccinations with calf lymph and that obtained from the dromedary at the same stages in the same individuals both in vaccinations and revaccinations, the right and left arms being used for the comparison.

THE CLIMATE OF EGYPT AND THE SOUDAN.

AT a meeting of the Royal Meteorological Society on March 16th Captain H. G. Lyons, F.R.S., formerly Director-General of the Geological Survey of Egypt and subsequently of the Egyptian Survey Department, delivered a lecture on the climatic influences in Egypt and the Soudan. After pointing out that from early times the Greeks recognized the marked difference between the climate of the Mediterranean and that of Africa, and that Aristotle indicated correctly the rains of Ethiopia as the cause of the annual flood of the Nile, Captain Lyons said that within the last ten years a network of meteorological stations had been established, and the observation thus made furnished a basis for further investigations. The comparatively low relief of the country, combined with the effect of the north-easterly trade winds which swept over it, produced the hot and dry conditions characteristic of North-Eastern Africa. Modified somewhat in the north by the warm waters of the Mediterranean, and in the south by the rains of the monsoon in summer, the highest temperatures and most arid conditions were reached between Wadi Halfa and Dongola, where northerly winds, clear skies, and a great range of temperature prevailed throughout the year. The important rains were those falling in Uganda, on the southern plains of the Soudan, and on the table land of Abyssinia. Fed by the south-easterly air currents blowing in from the Indian Ocean, these monsoon rains supplied the equatorial lakes, and the tributaries of the Nile. The Abyssinian table land, with its heavy summer rainfall, was the most effective, since it furnished the whole of the Nile flood, and enabled the Nile to maintain itself through 1,500 miles of desert. As the sole source of the flood, the variation of these rains directly determined the abundance or deficiency of Egypt's supply. Hardly less important in these days of intensive cultivation of cotton was the study of the winter storms which occasionally broke in the Soudan and Abyssinia, raising the level of the rivers and increasing the supply of the Nile appreciably at a time when the normal supply was inadequate. The climate of the region not only influenced the water supply, but the great range of temperature rapidly disintegrated the rocks, and the wind removed the finer portion of the material; in this way the deserts were being constantly modified, and vast ranges of sand dunes piled up. The distribution of vegetation was very markedly influenced both by the moisture and by the physical character of the country.

[1] *Centralblatt für Bakteriologie Parasitenkunde und Infektionskrankheiten*, Bd. 53, Heft 3.

NEW HOSPITAL AT SAN FRANCISCO.

THE new City and County Hospital of San Francisco when completed will be, it is said, the finest institution of the kind in the United States. The cost is estimated at £400,000. The site is 866 long by 760 wide and there will be erected on it a general hospital, a hospital for infectious diseases, and one for tuberculous patients. In addition to these there will be a power house, laundry, mortuary, and ambulance sheds and stables, all within convenient distance of the main buildings. The general hospital which will be four stories high, will have accommodation for 512 beds, and will be so constructed that if necessary the number of beds can be increased later to 752. The infectious diseases hospital will consist of two two-story ward buildings. Each floor will be divided into two units, each composed of a nine, three, and two bed ward. Thus there will be eight units of fourteen beds each. The buildings for tuberculous patients will be arranged and equipped in accordance with modern scientific doctrine. The patients will be divided into two classes—incipient and advanced. The incipient cases will be treated in a one-story arcade open on the south but protected from the wind; the advanced cases will be housed in two-story wards provided with shelters, which can be thrown open when this is thought necessary. The mortuary will consist of two autopsy rooms and a demonstration room, which will accommodate between 75 and 100 students.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Indian Medical and Nursing Services.—Last week Mr. Kelly put a series of questions to the Under Secretary for India, of which the first related to the resolution passed last September by the Bombay Medical Union, and to the belief among Indians that the main obstacle to a reform of the medical service was the desire to reserve the highly paid posts for the people of this country. Mr. Montagu replied that the Secretary of State for India was not acquainted with the resolution referred to, but if, as stated, it had been sent to the proper authorities in Bombay for transmission to him, it would doubtless reach him in due course. He was not aware of the existence among Indians of any such erroneous belief as that referred to in the

concluding portion of the question. Answers given to similar questions in this Parliament and the last, and the papers laid before Parliament, to which he would refer the hon. member, afforded ample evidence of the efforts that were being made to widen the field in regard to medical appointments. With reference to the opening of the nursing profession to Indian women, Mr. Montagu said that the General Hospital, Madras, was supported entirely from Indian revenue. As this was the principal State hospital in Madras, and received many European and Eurasian patients, it seemed advisable that the matron, assistant matron, and head nurse should be Europeans or Eurasians trained in European hospitals. Such training was hardly available for Indians. The diffusion of a knowledge of medical matters among Indian women, the importance of which was fully recognized, was promoted by schools for the training of nurses attached to this and to other large hospitals in India.

Madras Medical College.—Mr. Kelly asked the Under-Secretary of State for India whether there were under the senior assistant professor at the Medical College, Madras, and the senior assistant surgeon, General Hospital, Madras, Indian civil doctors with university qualifications sufficient to enable them to be registered under the Medical Acts and to be recognized as medical practitioners in this country; whether the present holders of these posts were military assistant surgeons who had only four years' course of studies prior to qualification; whether he was aware that military assistant surgeons were not allowed, according to the Army Regulations, to use the knife, and were allowed to perform only the duties of dispensers and apothecaries as long as they were attached to military hospitals; and what was the number of natives of India who had so far filled these posts. Mr. Montagu replied that there appeared to be no Indian Civil doctors with the qualifications indicated under the senior professor at the Medical College Madras. As regards the status of the latter officers, he referred the hon. member to the answer given by his predecessor to the question by the hon. member for Galway North on October 21st last. It was not possible to state what number of natives of India had filled these posts. He was not aware of any rule forbidding military assistant surgeons to perform operations.

Infantile Mortality.—The President of the Local Government Board informed Mr. Armitage that the rate of mortality amongst children under 5 years of age in England and Wales in 1901–8 was as follows:

Year.	Death-rate per 1,000 living.
1901	54.1
1904	51 6
1905	44.7
1906	45 3
1907	40 9
1908	40 6

Disinfection of Schools.—Mr. Ramsay Macdonald asked the President of the Board of Education whether the practice adopted in Scotland, and set out in the memorandum entitled the Cleansing and Disinfecting of Schools, was enforced in England; and, if not, if he would explain why such precautions should not be observed. Mr. Runciman replied that the Code of Regulations for Public Elementary Schools required that the school premises must be healthy and must be adequately lighted, warmed, ventilated, cleaned, and drained. The Board of Education had not so far put forward any specific recommendations as to methods of cleansing or disinfection. He was confident, however, that adequate precautions would be observed in this respect if the local education authorities acted in co-operation with the local sanitary authorities. In answer to a further question as to whether there were not special instructions given in Scotland as to cleaning after infectious disease, Mr. Runciman said that he was informed that the memorandum issued by the Scottish Office was issued in the form of a recommendation to the local authorities, and was not an ordinary regulation. In so far as it might be wise to issue such a recommendation to the local authorities in England, he would consult the President of the Local Government Board to see if they could act together in this matter.

Lead Poisoning.—Mr. Clynes asked whether the Home Secretary's attention had been called to a case of alleged lead poisoning at Pilkington's tile works, Clifton Junction, Manchester; whether the medical referee heard the medical attendant attached to the works without also hearing the medical attendant of the workpeople, and the judge therefore referred the case back; and what action his department had taken or would take in the matter. Mr. Churchill said that his attention had been called to this case. Where an appeal was made to the medical referee in a case under Section 8 of the Act both parties received notice from the referee of the time and place of the examination, and both were empowered, if they so chose, to send a representative or to make a written statement. In the present case the employer's medical man attended; the worker put in a written statement, but her medical man did not attend. The medical referee was, in these circumstances, acting in accordance with the law in deciding the case; but he understood that, at the request of the judge, he was about to re-open it and to hear the worker's representative. There did not appear to be any grounds on which the department could take action in the matter. On a later day Mr. Clynes asked about a second case of lead poisoning at the same works, and the Under Secretary replied that notification of lead poisoning in a person who was previously employed at these works, but who left in May last, had been received in the Department. The Secretary of State understood that the certifying surgeon refused to give a certificate of disablement under Section (8) of the Compensation Act, but that an appeal against his decision had, on reference to the medical referee, been allowed. On receipt of this decision, Messrs. Pilkington at once arranged to pay compensation. He might add that these were the only two cases that had occurred at their works, and that in both cases the women had left their employment for many months before the claim arose.

Glanders.—Mr. Charles Bathurst asked on Tuesday whether the Board of Agriculture had offical information showing that no case of glanders or farcy in horses had occurred in Ireland since November, 1907; and whether, in view of the fact that there had been no material diminution during the last few years in the large number of horses attacked by the disease in Great Britain, the Board would confer with the officials of the Department of Agriculture and Technical Instruction in Ireland as to the best methods of eradicating the disease in this country. Sir E. Strachey said: The reply to the first part of the question was in the affirmative. No useful comparison could be made between Great Britain and Ireland. The regulations in Great Britain were more stringent than in Ireland. In Great Britain last year there were only 536 outbreaks as compared with 1,066, 854, and 789 in the years 1906–7–8. A comparison of the number of horses "attacked" prior and subsequent to 1908 did not afford any guide as to the prevalence of the disease, inasmuch as "reactors" under the provisions of the Glanders or Farcy Order of 1907 were included in the returns for 1908 and subsequently, but not previously. The officers of the two departments were in continuous communication with one another both on this and other matters in regard to which they had similar duties to perform.

Death from Anthrax (Shipley).—In reply to Mr. Jowett, the Home Secretary said that in connexion with the recent fatal case of anthrax contracted at the works

of Messrs. Campbell and Harrison, woolcombers, of Shipley, a branch of the woolcombers' syndicate, the department had received a report, together with the depositions taken at the inquest. An exhaustive examination of the existing conditions at the works had been directed. The following table showed the number of cases of anthrax that had occurred at Messrs. Campbell and Harrison's factory and at all the factories of the combined firms of Woolcombers, Limited (including that of Messrs. Campbell and Harrison) from January 1st, 1900, to the present time:

Year.	Campbell and Harrison.			Woolcombers, Limited, including Campbell and Harrison.		
	Non-fatal.	Fatal.	Total.	Non-fatal.	Fatal.	Total.
1900	2	2	4	2	2	4
1901	—	1	1	—	2	2
1902	2	—	2	2	—	2
1903	2	—	2	6	—	6
1904	1	—	1	3	—	3
1905	5	6	11	7	10	17
1906	4	3	7	6	4	10
1907	2	—	2	5	—	5
1908	2	1	3	3	2	5
1909	5	—	5	6	—	6
1910 (to date) ...	—	1	1	—	1	1
Total	25	14	39*	40	21	61

*Not including a housewife (non-fatal) in 1903, whose husband, son and sister, all worked in this factory.

Formaldehyde and Chilled Meat.—Mr. Burns stated last week, in reply to Mr. Hamilton Benn, that the use of the formaldehyde process in the preservation of chilled meat was a subject which had been carefully investigated by his department, and detailed information regarding the process was contained in the published Food Report, No. 9, to the Local Government Board. That report showed that the process had been used in such a way as to introduce material quantities of formaldehyde into the meat. To this there was serious objection, but he was advised that it was not essential to the process, and he had been in communition with the importers concerned with a view to a limitation in the amount of formaldehyde employed. Recent samples had shown a marked improvement in this respect. The process remained under careful observation, and in present circumstances it did not seem necessary to take steps to prohibit its use.

Deaths from Camping in Wet Weather.—Sir William Crossley asked the Secretary for War whether he had had any report of the number of deaths from pneumonia and phthisis which had taken place during the past six months amongst the Territorials present at last year's camps owing to peculiarly wet conditions. Mr. Haldane answered in the negative. The deaths of members of the Territorial Force who might die after the closing of camps were not specially reported to the War Office unless they were treated in military hospitals. Only one case had been reported to the War Office of a death from pneumonia. The regulations provided that if, in the opinion of the medical authorities, the conditions prevailing when camps were in progress rendered it necessary to provide tent bottoms, they might be issued. They were not ordinary articles of camp equipment. Waterproof ground sheets were issued when tent bottoms were not supplied.

Sleeping Sickness in the Congo.—In answer to Mr. Rees on Monday, Colonel Seely said that he understood that, after consultation with King Albert, the Belgian Minister of the Colonies had decided to organize an expedition to go to the Congo to study sleeping sickness and to find means, if possible, to remedy it. He had no doubt that the British authorities engaged in the investigation and prevention of the disease would be ready to co-operate, as far as was practicable, with the Belgian expedition.

Typhoid Fever at Funchal (Madeira).—Mr. Staveley Hill called the Foreign Secretary's attention to the outbreak of typhoid at Funchal, and asked whether the authorities at Lisbon had converted the mountain water to relieve the distress caused to British visitors by the neglect of the municipality to provide proper drinking water. Sir Edward Grey replied that, according to information which he had received from Madeira, the cases of typhoid fever had been practically confined to one hotel, there being only four or five other cases in the rest of Funchal. The question of approaching the Portuguese Government with a view to the improvement of the water supply had been brought to his notice and to that of His Majesty's Minister at Lisbon, but it did not appear to be a matter in which he could properly intervene officially.

THE WEST AFRICAN MEDICAL STAFF.

THE Secretary of State has approved the recommendations of the Advisory Medical and Sanitary Committee for Tropical Africa regarding the regulations to be applied to officers who have reached the maximum rate of pay receivable by those in the initial grade of the service, £500 a year. The recent Departmental Committee recommended that for the benefit of such officers a new grade should be created, those appointed to it being entitled first class medical officers, and the scale applied to them being £500, rising by increments of £25 annually to £600 a year. The suggestion of the committee was that admission to the proposed new grade should be on the recommendation of the principal medical officers, who would submit a report concerning all officers approaching the end of the fifth year of their service, stating whether they were recommended for promotion to the new grade. On an officer being thus recommended he should be required to undergo, when he next went on leave, a course of study of not less than three months' duration, and subject to his obtaining a certificate of satisfactory attendance, diligence, and proficiency, should be promoted to the new grade as soon as he had completed five years' service, and had, therefore, reached the maximum pay of his existing rank.

The course of study now officially approved is three months' study either at the West London Post-Graduate College, or the London School of Clinical Medicine, Greenwich (or such other post-graduate course as may be approved by the Secretary of State on the application of the governing body concerned), in clinical medicine, clinical surgery, and pathology, but the following may be substituted:

1. The course of study and examination for a recognized diploma in public health, sanitary science, or State medicine; or
2. The course of study and examination for a further medical or surgical diploma or degree (in this case no fees will be paid by the Colonial Government, and the officer will only be given his railway fare and the ordinary allowance for lodging expenses); or
3. If the governor, on the recommendation of the principal medical officer, approves, a course of study in some special branch of medical or surgical practice—for example, ophthalmology, dentistry, dermatology, genito-urinary diseases, etc.—or an advanced course at the London or Liverpool School of Tropical Medicine.

In regard to the application of these arrangements to existing officers, it has been decided that in making their recommendations as to what officers of upwards of five years standing shall be placed on the new scale, the principal medical officers shall not take into consideration the question whether the officer has already taken his course of post-graduate study of any kind. All medical officers recommended must take the approved course, or one of the approved substitutes for that course, unless they claim exemption and are accorded it by satisfying the Secretary of State that they have already taken such a course.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

THE TREATMENT OF CONSUMPTIVES IN EDINBURGH.

A FURTHER stage in the evolution of the antituberculosis organization is marked by the purchase of the mansion house and lands (extending to about 50 acres) of Springfield, near Lasswade, for conversion into a farm colony. Within a month or two it is hoped that 20 or 25 patients drafted from the hospital will be working on the lands and in the gardens of the colony. In those cases in which the progress of the disease has been arrested by treatment in the hospital, the patients will be passed on to the farm colony to continue their cure and fit them for situations in which they may work without injury to their health. The work there will be graduated to the condition of each patient. First, there will be absolute rest, then some easy walking exercise; later, light work in the open air, until the time comes when from three to six hours may be faced. Springfield stands about 280 ft. above sea level, and has a mild climate, as evidenced by the luxuriant vegetation. The estate is well wooded and sheltered. A farm grieve, with practical experience of farming, has been engaged from Lord Rosebery's estate at Dalmeny, and under his guidance a few men from the Victoria Hospital are already at work, preparing the ground for vegetables and fruit trees. It is intended this year to take a crop of potatoes off the ploughed land, extending to about 10 acres, and Lord Rosebery, who is taking the greatest interest in the scneme, has undertaken to provide the necessary supply of seed potatoes. Poultry rearing is to be another part of the work of the colony, and here again Lord Rosebery has lent a hand by sending some fine Buff Orpingtons. These, with several other breeds of fowls already on the ground, are paving the way for future progress. Incubators are in use and a field of not less than 5 acres on a sunny southern slope is to be given up to poultry rearing. About 100 eggs were sent from Springfield to the Victoria Hospital during the past week. Pigs also are to be reared. The mansion house will not require much alteration to fit it for its new purpose. There are large glass houses where it is intended to grow tomatoes. The accommodation for the patients is ample and comfortable.

Dr. A. Macpherson, of Blackhall, a former assistant at the Victoria Dispensary, has been appointed Resident Medical Officer and Superintendent of the Colony.

THE DIMINUTION OF INFANTILE MORTALITY IN EDINBURGH.

The report by the voluntary health visitors in connexion with the Public Health Department of Edinburgh for the year 1908–9, just issued, touches upon many matters of vital importance in connexion with the prevention of infantile mortality, and is of great interest as showing the measures which the Public Health Department in Edinburgh is developing in order to cope with the scourge.

Organization.

In the beginning of December, 1908, and immediately following upon the appointment of an official health visitor for the city of Edinburgh, an offer made by a subcommittee of the Charity Organization Society to the Public Health Department, for the purpose of organizing a band of voluntary health visitors to assist in the effort to reduce the excessive rate of mortality among infants under 12 months, was cordially accepted. The principles observed in organizing the voluntary help were:

1. The utilizing of visitation as already found; and
2. Co-operation with existing educational, medical, and relief agencies.

The parish areas were used, and the various Church and other agencies invited to share in the effort. Where an area had no means of meeting the demands for this definite service, external aid was introduced. To prevent the effort from taking the form of a new relief agency, each captain of an area was provided with printed details of available medical aid, available food and clothing schemes, and with cards giving full information about charity organization centres for information and help. Working on these principles, the work of organization went forward with gratifying rapidity, forming a bond between all sections of workers interested, from whatever point of view, in social problems.

Method of Work.

The Notification of Births Act, adopted by the city of Edinburgh last year, gives the Public Health Department a knowledge of the birth of children within thirty-six hours. When the notices come from homes where no paid qualified medical man has been in attendance the official health visitor pays an initial visit, notes conditions of homes, etc., and passes on slips with the information to the secretaries of the voluntary visitors. The secretaries receive the notes each week, distribute the cases to the captains of the various areas, and the captains in turn distribute them to the individual visitors. The visits must be paid fortnightly, in cases of illness much oftener, and a short written report is given each fortnight to the Public Health Department.

At fortnightly meetings held in the City Chambers on Saturday mornings, general points of business and development are discussed, and the written reports received. The captains of the areas meet on the first Monday of each month.

Aim and Development.

A large part of the city has already been thoroughly organized. It is believed that concentration on the health of young children will result in the evolution of principle, the gradual uplifting of motherhood to the standard required by the city.

Rules.

I. All cases on a visitor's list shall be seen at least once a fortnight.

Any case which is not thriving or is ill should be seen oftener.

II. A card shall be kept with register of the visits paid, and remarks on the condition of the child and of the house.

III. Once a fortnight a written report of all the children visited shall be given in to the superintendent at the Council Chambers, at an hour to be arranged.

IV. In all cases the visitor shall encourage the mother to nurse the child herself.

If the child is not thriving the visitor may verify this by having the child weighed at the Hospice, 219, High Street, and, if necessary, directions should be given the mother regarding her own diet. In the case of the child continuing to lose weight the family doctor should be called in or the child sent to the Sick Children's Hospital or to a dispensary.

In no case shall a visitor advise a mother to cease nursing her baby without the approval of a doctor.

V. All children on artificial feeding should be weighed regularly at the hospice.

VI. In sending children to the Sick Children's Hospital or to a dispensary, visitors shall, in every case, supply a card to the mother, which shall be shown to the doctor, stating that the child is being visited under the Public Health Department.

VII. Any cases of urgency not referred to in the foregoing rules should be communicated forthwith to the Public Health Department.

Between the end of December, 1908, and November 15th, 1909, 803 babies were placed under visitation; of these 52 died, 55 families removed and were lost sight of, and 9 left Edinburgh.

Education of Health Visitors.

During last session a series of lectures for health visitors by various medical men and women in Edinburgh was organized. The lectures were largely attended, and for the present session courses of lectures, both junior and senior, have again been arranged.

Education of Mothers.

Last winter, by permission of the School Board of Edinburgh, a room in Milton House Public School was placed at the disposal of the executive for a set of lectures to mothers. The meetings were held on Thursday evenings at 8 o'clock, and the attendance varied from sixteen to thirty. As the Social and Sanitary Society has an admirable scheme of health

lectures available for mothers' meetings, the executive felt that this need was already being so fully met that further efforts on this line would lead to overlapping of energy, so it was agreed that, from time to time, intimation of these lectures should be made to the visitors, and that the leaders of mothers' meetings should be urged to utilize them.

This winter the School Board has organized a set of cookery lessons for mothers. The programme has arranged to include four demonstrations, and sixteen practical lessons in the simplest, most nutritious, and economical cookery.

Weighing of Babies and Pure Milk Supply.

In January, 1909, the Medical Committee arranged that infants under the charge of voluntary health visitors, might, when necessary, be weighed at the hospice. In February seven infants were weighed. The numbers thereafter gradually increased, and in November twenty-three infants were sent for weighing. The total number of weighings for the ten months ending November 30th were 301. At the weekly weighings the mothers are given advice as to the feeding of their infants, every effort being made to encourage breast-feeding.

Arrangements have also been made for the weighing at their own homes of infants which cannot be brought to the hospice, and in November six cases were dealt with in this way.

In connexion with the hospice there is a milk dépôt for infants. In the first half of the year the milk used was Buddeised milk, but since the end of July the milk has been undiluted pasteurized milk from tuberculin-tested cows. It is supplied by the company which supplies the City Hospital, and the dairies and byres are subject to the inspection of the Medical Officer of Health of Edinburgh. The milk is put up in sealed bottles in wire baskets. Each bottle contains one feed of milk and the baskets contain a sufficient number of bottles for one day's use. The milk is supplied at the rate of 1s. to 2s. a week.

Sample cradles are sold to mothers for 1s. each, and a "clothing department" has been originated which it is intended shall eventually carry out orders given by the mothers through the visitors and be a means of encouraging the mothers to contribute to a provident fund. In some of the districts bags of baby clothes are made, and are lent in cases of distress.

THE ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

The directors' report of the work of this hospital for 1909 contains several items of considerable interest. In this hospital, contrary to the custom of many Continental and most American children's hospitals, infants form a large percentage of the cases treated as in-patients. Of the 2,037 cases admitted to the wards during the year, 432 were under 1 year of age, and 328 were between 1 and 2 years. In the out-patient department the proportion of infants is also high, and as in both classes of cases the success or failure of medical treatment very largely depends upon proper dietetic facilities, the questions of the supervision of the milk supply and the modification of the milk are highly important for the in-patients, while even more for the out-patients is a reliable source of variously modified, bottled milk a necessity. Lacking it, medical advice and medicines must always be woefully insufficient, and though the directors of the hospital, by appointing a lady visitor to superintend the carrying out of instructions in the home have undoubtedly taken a step in the right direction, it is expected that in the near future they will take steps to make it possible more directly and scientifically to treat disease by affording facilities for the securing of satisfactory nourishment for the infant patients. On its more purely scientific side the hospital has been greatly strengthened during the past year by the development of facilities for bacteriological and pathological work and by a considerable expenditure on laboratory equipment.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The following scheme of the Ross and Cromarty Education Committee was approved by the Scottish Education Department on March 8th, 1910:

1. For the purpose of school medical inspection and supervision the county shall be regarded as one area (including all burghs).
2. The staff shall be *for the present* the medical officer of health for the county, at an honorarium of £50. Two medical officers under him—one for (A) the mainland section of the county (excluding the parishes of Applecross, Lochcarron, Lochalch, Kintail, and Glenshiel); (B) the Island of Lewis, with the mainland seaboard parishes excluded from District A.
3. In the case of District A the duties shall be mainly those of school medical inspection and supervision, and the balance of that officer's time shall be given to public health administration, such co-operation to be arranged between the county council and the district committees, without any further cost as to salary.
4. Both officers appointed to Districts A and B shall be debarred from private practice and parish council appointments, and must give their whole time to their duties.
5. The officer in District B must have the Diploma of Public Health, and the officer in District A, if not having this qualification, must obtain it within three years from the date of appointment.
6. The salary of the officer in District A shall be £250; in the case of the officer in District B £250, rising to £300. Maintenance charges will be 15s. per night of necessary absence from head quarters, and reasonable travelling allowances will be made on a scale to be afterwards fixed.

EDINBURGH SCHOOL BOARD'S SKIN DISEASES SCHOOL.

A considerable amount of feeling has been displayed in connexion with the decision of the Edinburgh School Board to establish in Lauriston Place a special school for children suffering from skin diseases. A public meeting was held in the Oddfellows' Hall on March 8th for the purpose of protesting against the establishment of such a school in the neighbourhood selected. Dr. Michael Dewar presided over a large gathering, and in the course of his remarks said they were not opposed to the establishment of a skin diseases school, in fact they were very much in favour of it; what they objected to was the site which had been selected for it. After some discussion, the following resolution was declared to be carried: "While expressing approval of the School Board's decision to establish a school for children suffering from contagious skin diseases, they strongly protest against the school being located at 41, Lauriston Place, on the ground that Lauriston Place, being one of the busiest thoroughfares in the city, and one of the most frequented by children from many districts, is very unsuitable as a site for such a school, and they are of opinion that any building used for this purpose should be separate from private residences."

GLASGOW ROYAL INFIRMARY CLUB.

At the annual dinner of the Royal Infirmary Club composed of past residents and members of the staff, over which Dr. G. A. Heron, London, presided, the secretary reported that the club was now well established with a roll of 180 members; past residents desiring admittance should apply to Dr. Scott, 103, Hyndland Road. The Chairman proposed the toast of "The Royal Infirmary," remarking on his association with it during the years 1863–1868 and the contrast between the surgery of those days and now. Dr. Wm. R. Sewell replied to the toast, and related incidents of his residence at the infirmary in 1875. Dr. Jas. A. Adams, in proposing "Past and Present Residents," said that the first superintendent in 1830 had to act as physician, surgeon, and even as matron; while Dr. Fergus, who replied, drew attention to the amount spent that same year (1830) on leeches for use in the infirmary. The sum was £77 19s., and as they cost 7s. a hundred the total used was over 22,000.

GLASGOW INFIRMARIES AND THE COMMON GOOD.

A very interesting point is at present before the Finance Committee of the Glasgow Corporation. A request for a contribution from the "Common Good" Fund of the city, for the Glasgow Royal Infirmary, was made by a deputation from the governors of the infirmary on the ground of the great public service rendered by the institution to the whole

community. Should such a grant be made, it is, of course, realized that other similar institutions will lodge similar applications, and the whole question of payments from the city funds towards the maintenance of the charitable and other institutions in the city will come under review.

Glasgow Samaritan Hospital.

The difficulties which the smaller hospitals experience in collecting sufficient funds to meet the ordinary expenditure leads to the adoption of somewhat out of the way methods of raising funds. The Samaritan Hospital last year was exceptionally successful in this respect, as it received over £1,500 as the result of a special fancy dress ball, and £130 from a theatrical production. Even so it was necessary to transfer over £600 from the extraordinary revenue to meet the deficiency of £1,234 in the ordinary income of 1909, and the deficiency of £1,151 carried forward from 1908. Owing to the legacy of £10,000 obtained from the Dick Bequest, the hospital this year was able for the first time to close its financial year with a large sum to the good. Still, the hospital buildings are not yet complete; a new laundry and a properly equipped laboratory for research purposes are required, and it is estimated that they will cost about £6,000. The Muirhead trustees have decided to found in connexion with the hospital a post-graduate scholarship for women graduates willing to undertake original research.

Nursing and Hygiene Competition.

The annual competitions for the Hedderwich Cup and Anderson Cup of the St. Andrews Ambulance Association was held in Glasgow on March 12th. The cups are competed for by teams of four from the various sections of St. Andrews Ambulance Corps throughout Scotland, the Hedderwich Cup being for teams of ladies, and the Anderson for teams of men. The subjects of examination are general knowledge of home nursing and hygiene, and also practical work, such as bed making, lifting patients, application of remedies, preparation of poultices, fomentations, etc. The arbiters were Dr. P. F. Shaw, Glasgow, and Miss H. Gregory Smith, Matron of the Western Infirmary, Glasgow. A team from the Edinburgh Women's No. 1 Section secured the Hedderwich Cup, while a team from the Leith and District Section won the Anderson Cup. In each competition an Edinburgh team also obtained second place. Gold badges are awarded to the individual members of the winning teams.

Ireland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Research Defence Society.

The Dublin Branch of the Research Defence Society held its first annual meeting on March 15th in the theatre of the Royal Dublin Society under the presidency of Sir Charles Ball. The report stated that it was the experience of the Committee that even within the single year of its existence the Dublin Branch had proved of immense use in spreading a knowledge of the truth about experiments upon animals, and of the regulations under which these experiments were conducted, as well as of their importance to the welfare of mankind. The Committee was of opinion that it needed only a more widely-spread knowledge of the facts to counteract the influence which had been gained over so many of the public by those who are opposed to experiments on animals. The adoption of the report was proposed by Professor Symmers, seconded by Professor Culverwell, and unanimously carried. A committee for the ensuing year was then appointed, and the proceedings terminated.

Queen's University, Belfast.

The annual dinner, formerly of the college, now of the university, was held on St. Patrick's Day, March 17th, in the large examination hall. This is the first annual dinner of the university. The Vice-Chancellor (Rev. Dr. Hamilton) occupied the chair. After the loyal toasts, Sir John Byers, M.D., who proposed the toast of "The Lord Lieutenant and Prosperity to Ireland," after saying that all sympathized deeply with Their Excellencies in their recent tragic bereavement, went on to observe that Belfast should not try to make the university a replica of any pre-existing one on the other side of the Channel, but should seek so to develop and model it that it might take colour from its environment, and in time have an individuality of its own. He trusted that in that university of Belfast every type of Northern Irishman would commingle, animated with the patriotic desire to advance the reputation of their country in every branch of intellectual effort. One of the most important features of their new university—in the success of which Their Excellencies rejoiced—was their medical school (academic and clinical), and the medical men of the North of Ireland would never forget under what a debt of gratitude Lord and Lady Aberdeen had placed them in not only coming to the late annual meeting of the British Medical Association (of which they were both now honorary members), but for the deep interest they had taken in all its proceedings. Professor Baxter, in reply, said that, as one who had the honour to represent Dublin University, he could say that the foundation of Elizabeth wished well to the foundation of Victoria, for, though Queen's was made a university under Edward, it looked back to Victoria. Professor Henry, in proposing the toast of "The Queen's University," said whatever fears there had been as to the success of the university had been dissipated during the course of the year. The machinery which the Commissioners had given them had worked from the beginning almost without a hitch. The university had embarked upon a voyage which he hoped would be long and prosperous. The toast was coupled with the name of the Vice-Chancellor. It was many years since the Vice-Chancellor first conceived the idea of a university for Belfast. He had held to it through many discouragements that might have made even him depair, but this year he had seen his hopes fulfilled, and in their names and his own he tendered to the Vice Chancellor his heartiest felicitations.

The toast having been enthusiastically drunk,

The Vice-Chancellor, in responding, said if they were not satisfied with the progress made during the twelve months they would indeed be hard to please. The people of the North of Ireland had shown their confidence in the university by sending their sons and daughters, and now the Building Committee was looked to in the hope that they would provide new buildings. The Students' Union would be enlarged, and the medical buildings would also be added to. The Students' Union, which was at present far too small for the demands made upon it, might be extended and the library accommodation greatly increased, while two great blocks would be erected which would add enormously to the appearance of the western facade, which since its erection was one of the architectural glories of Belfast. During the last year there had been an amount of activity and work shown in the women's hall and other departments which was not known before. He looked forward to seeing in the near future a faculty of applied science, which would enable them to provide for a great manufacturing centre. They were bound not only to educate men and women for the old learned professions, but those who in the future were to be their great captains of industry.

The Prevention and Treatment of Tuberculosis.

Hospitals' Tuberculosis Committee.

At the second annual meeting, over which Sir John Moore presided, of the Hospitals' Tuberculosis Committee, a series of reports from the doctor and nurses who are occupied in special tuberculosis work in the city and its suburbs was submitted and approved. All these reports make most encouraging reading, and prove how much good can be done over an extensive district by a small number of enthusiastic workers.

In addition to disseminating information concerning the methods of preventing infection, the nurses have been the means of providing food, clothing, and coal to a large number of families rendered destitute by disease of the father. They have also succeeded in obtaining the admission of several tuberculous patients into various institutions. The Holiday Home at Sutton for weakly but non-tuberculous individuals has proved a great boon during the year, several of its inmates having been restored to robust health. The Samaritan Committee also has done good work, and deserves much greater financial support from the public. Although the committee had only a little over £100 at its disposal, it was able to supply nourishment to 107 families, to provide clothing for 98 patients, and to pay the rent for 17 families during the time that the breadwinner was under treatment in a sanatorium. Through its agency also 89 children of parents suffering from tuberculosis were sent for varying periods to the country. The tuberculosis district nurses, three in number, paid over 7,000 visits to patients at their own homes in the last twelve months.

National Hospital for Consumption.

The report of the National Hospital for Consumption, which was presented at the eighteenth annual meeting of the supporters of this institution, stated that during the past year 467 cases had been under treatment, and that only 5 deaths had occurred. In spite of the large number of cases treated, the applications for admission far exceeded the available accommodation, and the Board called attention to the urgent necessity for the establishment by the local authorities throughout Ireland of local sanatoriums, a step which is now rendered possible by the recent Irish Tuberculosis Act. The report also points out that of the cases admitted in the early stage of the disease 96 per cent. showed improvement, while only 53 per cent. of those admitted in a more advanced stage showed any evidence of improvement. Apart from its direct value in individual cases, the Board rightly insist on the importance of a sanatorium as an educating force. During the eighteen years of its existence 3,500 patients have passed out of the hospital, all of whom had learnt the value of sunshine and fresh air, and who, going to different parts of the country, had been in a position to make known to a wide circle the facts of which they had gained a practical knowledge.

Decrease of Tuberculosis in Dublin.

Speaking at a recent meeting of the Terenure Branch of the Women's National Health Association, Lady Aberdeen quoted some previously unpublished statistics of the Registrar-General for Ireland to prove that there has been a striking decrease in the deaths from tuberculosis in the Dublin registration area during 1909. As compared with the previous year the deaths from pulmonary tuberculosis, which numbered 1,049, decreased by 125, and those from all forms of tuberculosis 1,508 in number, decreased by 234. While recognizing the possible significance of these figures and the encouragement that might be gained from them, we think it unwise to draw any deductions from them at present, as to do so would only give the opponents of the Anti-Tuberculosis Campaign an opportunity for effective criticism, if in subsequent years the improvement was not maintained or if any increase in mortality should be recorded.

Tuberculosis Prevention Act.

The Pembroke Urban District Council have decided to adopt the provisions of Part I of the Tuberculosis Prevention Act of 1909—the Act to come into operation on May 1st, 1910.

THE WOMEN'S NATIONAL HEALTH ASSOCIATION.

The Cork branch of the association still continues its active crusade. A series of lectures are being delivered by one of its officers to the poorer classes on the care of the young, and the most gratifying interest is being evinced by the listeners. A special feature of the work of the association consists in addresses to mothers at the Mothers' and Babies' Club which has recently been established in the city as an auxiliary to the National Health Association. Unfortunately the sanitary authorities in the city have not yet taken the necessary step of appointing a woman health visitor, and the duties which might be discharged by such an officer have to be undertaken by voluntary effort.

ST. PATRICK'S NURSES' HOME.

During last year the staff of St. Patrick's Nurses' Home consisted of a superintendent, a district superintendent, from four to seven staff nurses, and from four to five Queen's candidates, and as this number of officers paid over 45,000 visits to 2,309 cases it may be concluded that the Home is being worked in a thoroughly efficient manner. The institution is entirely unsectarian, and by its means numerous incurable cases amongst the poor are systematically looked after. Some months ago Miss Hughes, General Superintendent of Queen Victoria's Jubilee Institute, inspected the Home and the work of the nurses in the district and reported that a high standard was consistently maintained.

England and Wales.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

LEEDS.

INSTALLATION OF CHANCELLOR.

THE university had for its first Chancellor the Marquis of Ripon, one who from the earliest phases of the Yorkshire College had taken the greatest interest in its development. The Marquis of Ripon was appointed by the Crown on the formation of the university, and the charter provides that all his successors should be appointed by the Court of the University on the nomination of the Council. The choice has fallen on the Duke of Devonshire, and the university is fortunate in having received the cordial consent of His Grace to act in that capacity. It may be remembered the late Lord Frederick Cavendish was president of the Yorkshire College, and every one interested in the university will recognize as singularly fitting and welcome the renewed connexion of the university with the house of Cavendish. The installation of the new Chancellor will take place on June 11th.

CHANGES IN THE SURGICAL TEACHING STAFF AT THE UNIVERSITY.

Consequent on the resignation by Professor Littlewood of the chair of surgery certain changes in the personnel of the teaching staff of the university have come about. A committee of the council of the university having been appointed to discuss the advisability of increasing the amount of clinical instruction and lessening the number of systematic lectures, recommended that a professorship of clinical surgery should be instituted, and that the number of systematic lectures on surgery should be reduced to about forty, which would allow for two lectures a week during the working weeks of the second and third terms. These lectures, it was recommended, should be delivered by the new holder of the chair of surgery, who should carry on the title of professor of surgery. The council, acting on the recommendation of the committee, has appointed Mr. R. Lawford Knaggs, M.D., M.C., F.R.C.S., to this position. Mr. Knaggs has for some years been the lecturer on practical surgery. The duties of the professor of clinical surgery will be to deliver one lecture a week during the first term. These lectures may be given at the school of medicine or at the infirmary, and will of course in no way take the place of the clinical lectures which are at present delivered every week by the various members of the honorary staff of the infirmary. To this new professorship the council, acting on the recommendation of the committee, have appointed Mr. B. G. A. Moynihan, M.S., F.R.C.S. Mr. Moynihan's connexion with the teaching of clinical

surgery in Leeds is, of course, well known, but all his colleagues on the Board of the Faculty of Medicine and on the Senate of the University will welcome the more intimate association with the work of the university which must result from his new appointment. Some years ago Mr. Moynihan was one of the honorary demonstrators of anatomy, and his Arris and Gale lectures were, in part, based on investigations he undertook in that department. As lecturer on practical surgery Professor Knaggs is succeeded by Mr. Walter Thompson, and Mr. J. F. Dobson has been elected to fill the vacancy created by Mr. Thompson's transference in the lectureship on operative surgery.

LONDON.

The Paddington Tuberculosis Dispensary.

The Tuberculosis Dispensary in Paddington, the first institution of the kind to be established in London, held its first annual meeting on March 17th, when the Mayor of Paddington, Mr. H. H. Fuller, presided over a large meeting, which included Princess Marie Louise of Schleswig-Holstein. The report showed a very satisfactory year's work, 887 patients having been attended at the dispensary in the first twelve months. It is noteworthy that a large proportion of the patients were referred to the dispensary from St. Mary's Hospital and from medical men in the district, showing that the work of the institution is appreciated not only by the public medical charities, but by the private practitioners with whom its aim is to co-operate and not to compete. The main feature of the work of such a dispensary consists in the visits to the homes of the consumptives to encourage and assist them in carrying out directions for treatment, and for safeguarding their families from infection.

After some preliminary remarks by the chairman, the meeting was addressed by Dr. R. W. Philip, of the Royal Victoria Hospital for Consumption, Edinburgh; Sir Malcolm Morris, K.C.V.O., and Dr. Dudfield, M.O.H. for Paddington, chairman of the committee of the dispensary.

Dr. Philip, in an excellent address, sketched the requirements for the campaign against tuberculosis, and emphasized the essential importance of getting at close grips with the disease by visiting the home of the consumptive, where, above all other places, the conditions on which the spread of the disease depends were to be found and combated. He gave the experience of similar work in Edinburgh, which had furnished the inspiration and the model for the work in Paddington, and enumerated the main particulars in which such a dispensary could act with advantage, filling in gaps in the general scheme of prophylaxis, which could by no other organization be so satisfactorily covered.

Sir Malcolm Morris pointed out that in order to achieve success knowledge and confidence were necessary—knowledge of what was required and confidence in the efficacy of the measures recommended to meet these requirements. The Paddington Tuberculosis Dispensary was certain of success, for its organizers possessed both knowledge and confidence. The report of the first year's work already justified that confidence. He expressed the conviction that this dispensary was only the first of a number of similar institutions which would soon be found in every borough in the metropolis. London, because of its huge size, was slow to move and was behindhand in this necessary factor in the prevention of tuberculosis; but having now been given a lead, other boroughs would be compelled to follow when they saw what good work such dispensaries could accomplish.

Amongst those present on the platform were Miss McGaw, the founder and joint secretary; Sir John Broadbent; Dr. Porter, medical officer of health for Marylebone; and Mr. Garland, honorary secretary, Sanatorium for Workers, Benenden.

The Infants' Milk Dépôt at Lambeth.

The Public Health Committee of Lambeth Borough Council on March 17th recommended the Council—contrary to the advice of the medical officer of health, Dr. J. Priestley—to discontinue the municipal milk dépôt as a council undertaking, and to transfer it to a private firm. The committee pointed out that the establishment of milk dépôts had not yet been legalized, and suggested that the systematic visiting of newborn infants now carried out under the Notification of Births Act made the milk dépôt unnecessary, and further that there was not a sufficiently increased patronage to justify the cost.

Dr. Priestley reported that since February, 1906, when the dépôt was opened, 849 infants and children had been fed upon the milk (which had been humanized). There had been 59 deaths, giving a death-rate of 69.5 per 1,000, but taking only those fed on the milk for as long as six months, the death-rate was 22.7. Making allowance for the limited number of children in respect of whom the statistics had been compiled, it was evident that there had been a large saving of life among them as compared with the rest of the children in the borough, the general infantile death-rate of which varied in the different wards from 110.9 to 199.7 per 1,000. The Council only allowed a sum of £200 per annum, so that the administration of the dépôt had been restricted. The plant was capable of dealing with 400 to 500 children a day without proportionate increase of the expenditure. The excess of expenditure over income had risen from £206 in 1907 to £315 in 1909. In the debate no one—not even the Chairman—defended the Public Health Committee's recommendation, and by a considerable majority it was decided to continue the dépôt.

MANCHESTER AND DISTRICT.

The Dental Hospital and the Dental School.

At the annual meeting of the Manchester Dental Hospital, Professor Hickson spoke of the importance of the renovated hospital to the Manchester Medical School. It was hoped that through the hospital it would now be possible to establish in Manchester what has long been needed—a thoroughly efficient and up-to-date school of dental surgery. With such an institution and with the increasing number of dental students, there was no reason why the Manchester School of Dental Surgery should not be one of the best in the country.

The annual report of the committee showed that 19,088 patients had received treatment during the year, an increase of 2,368 over the previous year. The new building was opened early last year, and the report pointed out that £2,700 is still needed to free the building from debt. At the close of 1908, there was a deficit on the current account of £233, which had increased by the end of the year 1909 to £581. There are now fifty-four dental students on the books, which is the highest number ever recorded.

The Hospital for Skin Diseases.

At the annual meeting of the Manchester and Salford Hospital for Skin Diseases, the medical report stated that there had passed through the out-patient department 7,738 new patients, an increase of 269 on the previous year and of 1,056 on 1907. The figures for the in-patient department were practically stationary. There had been a marked decrease in the number of persons presenting themselves who were unsuitable for treatment, which was due to the fact that it was now becoming well known that strict inquiries were made as to the position and means of all applicants. A striking feature, however, was the great increase in the number of children of school age who had attended. The honorary treasurer stated that there was now a balance due to the bank of £711. It was fortunate that through the matron's efficient management there had been a reduction in the cost of up-keep. They had been able to feed the whole of the patients and staff at a cost of only 7¾d. a head a day. Owing to the Budget there was a great increase in the cost of spirits, which made a considerable item in the expenditure, and the treasurer believed that the Manchester Infirmary authorities had written to the

Chancellor of the Exchequer asking whether the spirits supplied to medical charities might not be obtained untaxed. Dr. Brooke, speaking for the medical staff, said the hospital had, *nolens volens*, become an adjunct of the Education Committees of Manchester and Salford, and there was fear that in time this would seriously tax its resources. The Lord Mayor, who presided, said the shortage of something like £600 a year was a serious matter, though for a comparatively new institution the hospital had done wonderfully well. The new building had been paid for, and the skin hospital was second to none in the world.

BIRMINGHAM.

THE BIRMINGHAM MEDICAL INSTITUTE.

THE annual report shows that the library now consists of 14,589 volumes, and that during the year 176 volumes were added, including 92 gifts, 30 purchases, and 54 bound periodicals. The reading-room is supplied with 65 periodicals; of these 39 are foreign and 26 British, 42 being presented and 23 purchased. During the year 815 volumes were issued to 109 borrowers. The members number 189, which is an extremely small list when compared with the great number of practitioners within the radius of fifty miles of Birmingham who are eligible for election. The expenditure was £495, and the income £469, so that there was an adverse balance of £26.

THE BIRMINGHAM HOSPITAL SATURDAY FUND.

The report for the year 1909 shows that the total receipts amounted to £19,689, which is £943 below the total of the previous year. The number of contributing firms was 2,171, against 2,153 in 1908. The position of the fund is more firmly established than it has ever been, and it is certain that with any improvement in trade the deficiency of last year will be more than made good. In October £10,000 was voted for distribution among the medical institutions of the city. The convalescent homes supported by the fund have done very valuable work during the year. At Tyn-y-Coed, Llanrhos, the convalescent home for men, the number of patients admitted was 1,123, as compared with 1,199 in 1908; but this decrease was due to some structural alterations which had been going on during the year. At Marle Hall, Llanrhos, the women's convalescent home, the number of patients was 1,228, as compared with 1,209 in 1908. At the Red House, Great Barr, the convalescent home for children, 539 children and 96 women were admitted, as compared with 568 children and 98 women in 1908. The total number of patients in 1909 was 2,986, as against 3,072 in 1908. The treatment at special hospitals of patients suffering from consumption is a very important part of the work of the fund; but fewer patients have actually been treated, owing to the limited accommodation available at the Eversfield Chest Hospital, St. Leonards-on-Sea, and the closing against all consumptive cases of the sanatorium at Weston-super-Mare. The committee report that the scheme for providing a consumptive home of their own as a memorial to the late Sir William Cook has made considerable progress, and it is expected that the Memorial Committee will shortly be able to make public their complete scheme. An eligible site not far from Birmingham can be procured on reasonable terms. During the year a number of firms have subscribed, and others have intimated their desire to specially contribute towards this scheme. It is hoped that the chief events of 1910 will be the opening of the new sanatorium and the increase of the fund to over £20,000.

THE next meeting of the Laryngological Section of the Royal Society of Medicine will be held on Friday next, April 1st, at the house of the Medical Society of London, Chandos Street. The temporary offices and library of the Royal Society of Medicine at 15, Cavendish Square, will be opened on Monday, April 4th.

Correspondence.

RISKS OF ANKYLOSTOMIASIS IN GREAT BRITAIN.

SIR,—Sir Thomas Oliver's paper read before the meeting of the Tropical Society in London in January, and commented upon in your issue of March 5th, draws attention to the very real danger of the spread of infection to Great Britain from other countries of ankylostomiasis. Our sanitary arrangements are fortunately more complete than in those tropical and subtropical countries where the disease has every facility for spreading, but there are many loopholes, even at home, which will suggest themselves, by means of which infection can extend; for instance, river-side bathing in summer amongst youths, when the warmth and moisture would be sufficient to hatch out any ova that in the course of nature found their way to earth. School-boys from infected colonies should be examined on arrival in England, and precautions taken against the spread of the disease. A patient of mine, who had become infected in Natal and had been under treatment for ankylostomiasis, returned to England last year, and there must be many other similar cases from infected centres arriving home; granted a favourable opportunity they would easily be the means of spreading infection.

There is no doubt that ankylostomiasis in the colonies has long been responsible for intractable anaemia in many instances, and in the light of Sir Thomas Oliver's recent researches and our increasing knowledge of the subject, it is not improbable that it will also be found here at home to be a serious factor to be reckoned with.—I am, etc.,

JOHN F. ELLIOTT,
Late Indian Medical Officer, Natal.

Rostrevor, March 12th.

CANCER OF THE CERVICAL OESOPHAGUS.

SIR,—As the result of Mr. Morriston Davies's clinical lecture three important practical conclusions already stand out prominently. They are:

1. The need of cautious, thorough, and expert oesophagoscopy to determine the extent of the disease before any excision operation is even entertained. This has been well emphasized by Dr. William Hill, and every practised oesophagoscopist will endorse it.
2. The expediency of early preliminary gastrostomy advocated by Mr. Mayo Robson. This would probably be a great advantage in any such case. It would certainly be so if our patient had survived the septic dangers of the first five or six days.
3. The disastrous results of upper oesophagus excision operations admitted by all.

The marked contrast in results between excision operations on the gullet and those on the (so-called) oesophageal pouches—which Mr. H. T. Butlin has taught us to tackle with such success—can hardly have escaped notice; and I would like to draw special attention to the fact that though such pouches may be of great size and extent in the neck their attachment to the food tube is severed *above* the upper oesophageal sphincter of Professors Killian and Arthur Keith, and that the wounds from such severance are subject to the simpler laws and conditions of mouth and pharynx operations. On the other hand, upper oesophagus excisions, by opening into the food tube *below* the upper oesophageal sphincter, lay open the lumen and walls of the gullet, practically integral parts of the main intrathoracic air pressure and drainage system, although the gullet is, for the time, in the neck at the moment of operation. Upper oesophagus excisions must, therefore, be regarded from the standpoint of the laws, conditions, and potential and essential dangers of intrathoracic operations.

May I attempt to further add to the value of the discussion which has been started by raising a definite question—by no means so simple as might first appear—and not a verbal quibble? What is the cervical oesophagus? I believe it must be conceded that certain corollaries of primary practical importance necessarily follow a correct and exact solution of my question. I have in view:

1. The interpretation of the notorious and widespread fatality of excisions of the oesophagus, with or without adjacent parts, in the past history of surgery.
2. The explanation of the striking practical successes of Professors Glück and von Hacker and their followers in the last few years in these deep throat and neck operations.

3.* The recognition of a true exciting cause of chronic irritation of intrinsic mechanical origin—until lately unsuspected—leading to the supervention of cancerous degeneration in the gullet, pharynx, and larynx.

4.* Terra firma for the foundation of approximately accurate ideas as to the relative frequency of the exact sites of commencement of cancer in the oesophagus, pharynx, and larynx—about which, up to the present, the statistics are in a state of indescribable chaos, as all investigators of the subject know. In the past the inclusion of almost any given case of deep-throat cancer in the oesophageal, pharyngeal, or laryngeal series, in practice, has been quite haphazard, and at the whim of the observer. This is still going on. If we determine accurately which spots or areas are sites of initiation of cancerous degeneration, and agree how such spots are to be named oesophageal, pharyngeal, or laryngeal, we shall soon be in a position not only to better estimate what irritation factors are incident at such individual spots, but we shall also get some true idea of the relative liability of the gullet, pharynx, and larynx to cancer. In both these ways we shall not improbably gain material for advancing our knowledge as to the genesis of cancer.

I will briefly refer to some considerations bearing on the solution of the problem I have propounded.

It is general knowledge that in the dissecting room, in the operating theatre, and in the *post-mortem* room, after free over-extension of the neck by wood blocks or sand-bags—a strained and non-habitual position in the living subject—the upper part of the oesophagus can be seen and excised. Does this prove that in any natural, easy, habitual position there is a cervical oesophagus?

It is quite generally unsuspected how wide are the excursions of the cricoid and larynx in varying states of extension and flexion of the cervical spine in different postures, on swallowing, and on protruding and retracting the tongue. During the last three or four years of my active charge of the Throat Department of St. Mary's Hospital I carried out an extensive series of skiagraphic examinations of boy patients of 10 to 15 years of age to determine this point. The extreme positions vary from the level of the third cervical vertebra to as far as the lower border of the cricoid is concerned—a certain small but indeterminate distance within the thorax.

The radiographer, after extension and rotation of the living neck, is able to produce skiagrams proving tissues between the cricoid and manubrium, among which must be, for the moment, the upper portion of the oesophagus. As soon, however, as the radiographer has taken his plate, and the head, neck, and chest of the subject resume the easy, natural position and relations of the perfect normal orthograde posture, if the finger be placed in the suprasternal notch, palpation of the cricoid will prove that that cartilage is on a level with the upper orifice of the thorax, and that there is very little, if any, oesophagus present in the neck. In fact, in the living human adult, in a natural orthograde posture at rest, with well-poised head and thorax, whether sitting or standing, or in the natural recumbent position in bed, head on pillow and chin on chest, the oesophagus is practically within the thorax, so that the upper oesophageal sphincter not only closes the gullet, but forms a locus on which impinge the stresses and strains of the respiratory fluctuations of intrathoracic air pressures at the thoracic inlet. The descriptive anatomist has, therefore, drawn largely on his imagination for his conception of a cervical oesophagus in any habitual natural resting posture, and the fiction has been accepted without question by the surgeon, most unfortunately, as I shall presently show.

Unlimited licence is freely conceded to the descriptive anatomist for the adequate display and preliminary descriptions of the forms and structures we have to study, and his conventions cannot be entirely dispensed with; but we must remember that "accurate representations of the exterior and interior of the dead body give no adequate idea of the movements and varying positions of those parts during life," and that "in a practical point of view anatomy is of no use unless it can be realized on the living body" (Dr. F. Sibson).

The descriptive anatomist has taken advantage to the full of customary licence in all his works, descriptions, sections, and topographical plates dealing with the anatomy of the head, neck, and thorax. After having unnaturally forced the head and neck into a state of extension which would be unendurable in life, and stuffed the gullet with tow, he has proceeded to conclude that the relations of the parts as seen in his dissections are the same as the relations in the natural living body. On the present occasion, I only wish to controvert the one conclusion that the natural level of the cricoid is at the fifth cervical vertebra, for this has been allowed too long to dominate our ideas in anatomy, physiology, surgery, voice production, physical culture, and drill, and *inter alia* has produced conceptions of a cervical oesophagus of quite exaggerated proportions. As a fact, the *habitual natural* position of the cricoid is much lower down—nearly at the level of the seventh-cervical-first-dorsal junction, where it forms, with the soft tissues, a two-tubed operculum or lid for the thorax, provided with highly specialized sphincters for opening and closing the thoracic orifices of the air tube and food tube, and the cervical oesophagus approaches to vanishing point.

The above are a few of the considerations that lead me to the conclusion that from the point of view of the surgeon there is no cervical oesophagus; and that if, under the influence of the descriptive anatomist, the operator allows himself to excise a cancerous upper oesophagus from a neck in a position of hyper-extension, and closes the wound, the course of events will soon demonstrate that the operation area of the gullet is intrathoracic, and not cervical; for the patient on returning to bed will soon assume the most natural and easy position, and will speedily withdraw the operated area of the oesophagus into the field of influence of the respiratory fluctuations of intrathoracic air pressure and venous and lymphatic suction. The operated area will also participate in every tension and movement fluctuation of the cricoid in respiration, and this more especially if the patient is a belly breather. The microbe-laden air current and buccal and laryngeal fluids will also, in nearly every case, have free access to the operated area. The surgeon will, in short, have created a state of affairs at the upper orifice of the thorax ideal for the production of sepsis, and from which a fatal result is, humanly speaking, unavoidable.

Professor Glück, on the other hand, by bringing out the trachea in the neck, and when necessary the oesophagus, and mooring them there, minimizes the risk of intrathoracic infection; for he cuts off the air current from the operated area and prevents the wound secretions from getting down the windpipe. But more than this, he prevents the retraction of the upper oesophagus and upper trachea wounds within the influence of intrathoracic pressure and suction conditions. I am not aware that he has ever attributed his successes, even in part, to the last-mentioned cause; he may have done so. From personal observation of this class of case I have no doubt that the group of facts I have dwelt upon in this letter are of cardinal importance for continued progress in the comprehension and management of cancers involving the upper oesophagus.—I am, etc.,

ROBT. HY. SCANES SPICER, B.Sc., M.D.Lond.

London, W., March 13th.

* Having recently placed before the profession suggestions on these points at the Belfast meeting of the British Medical Association, and published in the JOURNAL under "Some Points in Mechanics of Respiration," etc., and "Cancers of the Throat," I need not now repeat what is otherwise available.

THE TREATMENT OF DYSMENORRHOEA.

SIR,—I was somewhat astonished, in reading Dr. Gibbons's otherwise most excellent paper on dysmenorrhoea, to see that he was in the habit of ordering brandy or other form of alcohol to be given with coal tar analgesics in the treatment of this complaint. It seems to me that this is a serious thing both to order and to advocate. During the last few years I have met several cases of chronic alcoholism, all of which began by taking alcohol, chiefly gin, to relieve the pains of painful menstruation. The periodic recurrence of the pain leads to a periodic desire for alcohol which is always taken in increasing quantities. Thus the fatal habit is easily induced, and we all know how difficult or well-nigh impossible it is to cure. I do not think the recommendation of Dr. Gibbons to give alcohol in these cases should pass unnoticed.—I am, etc.,

H. M. COOPER, M.B.Lond.

Hampton-on-Thames, March 19th.

GASTRO-ENTEROSTOMY IN ACUTE DILATATION OF THE STOMACH.

SIR,—The letter from Mr. W. H. Brown in the JOURNAL of March 19th calls for an answer, as it refers to an address of mine reported in the JOURNAL for January 8th,

in which I discussed the treatment of acute dilatation of the stomach.

I am very much interested to know that Mr. Brown successfully performed gastro-enterostomy for acute dilatation seven years ago. This must, I think, have been the first case in which the operation was done, as my own case was later; but in the first edition of *Diseases of the Stomach and their Surgical Treatment* (Mayo Robson and Moynihan, London, 1901, p. 214) may be found the following paragraph:

> We would suggest that in every case of this kind, where stomach lavage has failed, but only then (for the stomach tube is the first indication, no matter at what stage it may be recognized, unless, indeed, the patient be actually dying), the abdomen should be opened, and the stomach emptied and connected with the jejunum, thus providing for continuous drainage into the intestine.

This shows, therefore, that the idea of gastro-enterostomy in exceptional cases of dilatation of the stomach was suggested nine years ago, that is, before Mr. Brown's operation.—I am, etc,

London, W., March 21st. A. W. MAYO ROBSON.

THE TREATMENT OF NEURASTHENIA AND PSYCHASTHENIA.

SIR,—May I thank cordially Dr. Edwin Ash for maintaining that "psychasthenia" can be "for all the practical purposes of life 'cured' for long periods"? The despondent note prevalent in medical literature, especially French writings, at the present time when dealing with this group of symptoms is unwarrantable. If these sufferers are afflicted with fixed ideas and obsessions, then let us see to it that their fixed ideas are sound and their obsessions healthy. Otherwise we must abandon them to Christian Science, whose exponents have devised an effective if immoral method of dealing with this condition.

The late Lionel Johnson struck the keynote of this mode of appeal in his sonnet on the siege of Münster in 1534, when the leaders of the Anabaptists harangued their followers:

> We are the golden men, who shall the people save:
> For only ours are visions perfect and divine;
> And we alone are drunken with the last best wine;
> And very Truth our souls hath flooded, wave on wave.
> Come, wretched death's inheritors, who dread the grave!
> Come! for upon our brows is set the starry sign
> Of prophet, priest, and king: star of the Lion's line!
> Leave Abana; leave Pharpar, and in Jordan lave!
>
> It thundered and we heard: it lightened and we saw:
> Our hands have torn in twain the Tables of the Law:
> Sons of the Spirit, we know nothing more of sin.
> Come! from the tree of Eden take the mystic fruit:
> Come! pluck up God's own knowledge by the abysmal root:
> Come! you, who would the reign of Paradise begin.

Might not this have been as well written of the Christian Scientists as of the Anabaptists? Is not the method the same? Bewilder the senses with a tornado of high-sounding words and phrases which sweep bare the whole mental field and follow with the firm implantation of a simple concept, "Disease is an illusion," and lo! a fresh obsession which transforms the sufferer into an apparently normal and cheerful being—as long as the disease *is* an illusion, and the "seven other devils" are kept at bay.

I admit we are handicapped. Our modesty precludes most of us from adopting a *vox medici, vox Dei* attitude. But it is not difficult by insight and sympathy to gain the patient's confidence; he is not usually at all unwilling to give it, except in the more inveterate cases. Many are simply sufferers from an abnormal sensitiveness, and are obsessed with the idea that they are "not like other people," "degenerate," or torment themselves with similar catch-phrases. I have seen surprising results in such cases follow the assurance that their real trouble is that they have a more finely organized nervous system than ordinary people, and that they suffer because society is constituted for, and by, folk of coarser clay than themselves. Seeing their impressionability, a change to a more favourable environment, when it can be effected, is often invaluable. Lastly, one may quote of "psychasthenia" what Dr. Ormerod (in Allbutt's *System of Medicine*) has written of hysteria—few things are more opposed to it than the trustful, patient, altruistic spirit inculcated by Christianity, and few things more conducive to it than the terrorism, revivalism, mysticism, or self-concentration which sometimes pose as religion.—I am, etc.,

London, N.W., Feb. 24th. J. S. MACKINTOSH.

PSYCHICAL RESEARCH.

SIR,—Dr. Millard seems rather troubled that the medical profession has not thrown itself, body and soul, into the study of spiritualism. But had not the profession the example of Faustus?—

> Cut is the branch that might have grown full straight,
> And burnèd is Apollo's laurel bough
> That sometimes grew within this learned man.
> Faustus is gone: regard his hellish fall,
> Whose fiendful fortune may exhort the wise,
> Only to wonder at unlawful things,
> Whose deepness doth entice such forward wits
> To practise more than heavenly power permits.
>
> (Marlowe's *Faustus.*)

—I am, etc.,

Oldham, March 21st. W. DUNCAN LAWRIE.

METHODS OF THE PSYCHO-THERAPEUTIC SOCIETY.

SIR,—The following account of a very recent investigation into the pretensions of the Psycho-Therapeutic Society (one of the many manifestations of the faith-healing and occult diagnosing craze which is so strange a feature of our days) may be of interest to the readers of the BRITISH MEDICAL JOURNAL.

My attention was first directed to it by a lady who recounted the marvellous skill of a Mr. S., an "operator" of the society, who (at a small charge) had diagnosed her condition with no hint from outside, and prescribed a most practical and successful line of treatment. Diagnosis was declared and treatment suggested, so I was informed, by the said Mr. S. while in a kind of self-induced hypnotic trance. He required to be told no symptoms; he desired to make no physical examination. He merely sat in a chair holding your hand, shut his eyes, and—well, the occult powers did the rest.

This was, at any rate, circumstantial enough. Determined to see what the result of a little independent investigation might be, I wrote to Mr. S., asking to be allowed to bring a patient some afternoon to his clinic, which appeared to be held at a house in Bloomsbury. I did not, of course, disclose the fact that I was a doctor. He sent me an encouraging reply, and the result was that I presented myself, with my patient, at the address which he had given me, on January 12th, at 4 p.m. I had selected one of our Church Lads Brigade lads for the purpose. He was an exceptionally healthy youngster of 16 or 17. I had examined him with scrupulous care, and could find no physical sign of any sort or description suggestive of disease. Nor were there any symptoms whatever. Except for childish complaints and an occasional attack of influenza, he had never had a day's illness in his life. But he *had* had for some years a small bony outgrowth just below the left knee, which had slightly increased in size since it was first observed. It caused no inconvenience, and Mr. Stanley Boyd, when I asked him to look at it for me one day at Charing Cross, advised against interference. Also the boy had strained the adductor tendons on the right side while playing football about a fortnight before.

Mr. S. presented the appearance of an elderly gentleman of benevolent aspect and grave demeanour. He was commendably brief in his procedure. My friend was quite right. It was no part of his practice to ask for symptoms or to make an examination. He sat down in a chair, holding the boy's hand. The lad was seated opposite. The seer closed his eyes and began to recount the "true inwardness of the condition" as follows. (I ought to have explained that I understand that years ago Mr. S. began to study medicine.)

> His blood was poor and thin and in a bad state. It was this which was the real cause of the congestion of the brain of which he complained. [The boy's percentage of haemoglobin is 97, and he has never complained of head symptoms in his life except in connexion with some acute infectious disease.] The nerves were very healthy and the nervous system was all right. The base of the brain was perfectly sound. In the throat there was often mucus and phlegm, but there was no

actual disease of the lungs. The bronchial tubes were in a very fairly healthy state. But the stomach was greatly at fault. The coat was congested and consequently could not assimilate food. The real cause of this were small thread-worms. [I rather suspect that the sage brings in the *Oxyuris vermicularis* whenever he has a patient below a certain age. This boy hardly looks his years.] It was these thread-worms which caused him continual sleepiness, and also gave rise to the excess of uric acid. The heart was free from actual disease. There was no disease of the valves. But it suffered from pressure by the stomach. There was no actual kidney disease, but the kidneys were slightly congested. The bowels were often obstructed, but the real cause of this was the thread-worms. Would we like to ask any questions?

I asked for a little information about "slight congestion of the kidneys," and certainly received it. It was most interesting and had all the charm of novelty. He went on to advise a rather colourless dietary. It was obviously so much more the sort of thing which would appeal to a neurotic woman that I thought the seer was getting a bit lazy and was allowing his imagination to flag. Possibly he finds that his dupes swallow anything so greedily that it is lost labour to take trouble over his flies. Finally he proposed to prescribe medicine. I said that I thought we would not trouble him further. "Oh, but," said a female amanuensis, in a tone of shocked surprise, "this is a pure herbal mixture." I assured her that I felt convinced of it, but the fact was that the boy had nothing the matter with him; his stomach, kidneys, and all the rest of it were in a perfectly healthy condition. What he had got was a small, bony outgrowth below one knee. We retired from a rather silent room.—I am, etc.,

Wimbledon, March 12th. H. G. G. MACKENZIE.

ALBUMINURIA AND "RETURN" CASES OF SCARLET FEVER.

SIR,—The subject of "return" cases of scarlet fever is of such importance to the fever hospital physician that any possible source of infection is worthy of careful investigation, but as the organism of scarlet fever has not been definitely determined, reliance must be placed on personal experience and statistics.

There can be little doubt that the toxin, or the organism of scarlet fever, or both, are excreted by the kidneys, during which process these organs are, in a certain percentage of patients, more or less affected. Whether the kidneys are affected or not, and to what extent, depends probably to some extent on the particular "strain" of the organism, but is chiefly a matter of idiosyncrasy. This is borne out by the facts that kidney trouble is more common in some outbreaks than in others, and also is often seen in several members of the same family.

Now, cases of albuminuria or nephritis—for the cause of both is the same—generally arise when the patient is about three weeks ill, and as they usually take some time to clear up and require careful after-treatment, it follows that the period of isolation is long; and even if the existence of these complications is an index of infectiousness, the chances are that the patients will be free from infection on discharge, provided, of course, that there is no other complication—for example, rhinorrhoea or otorrhoea—present.

I have not, during some fifteen years' fever hospital experience, found that patients who have had albuminuria or nephritis are liable to give rise to "return" cases, and the following table confirms my statement. Moreover, I have discharged patients with albuminuria with no untoward results:

Year.	Cases Discharged.	Number of "Return" Cases.	Cases of Nephritis.	Cases of Albuminuria.	Nephritis or Albuminuria in Infecting Patient.
1904	326	8	3	15	0
1905	435	9	8	21	0
1906	433	7	6	13	0
1907	405	4	9	7	0
1908	216	5	5	7	0
1909	444	12	15	14	0
	2,259	45	46	77	0

Thus while out of 2,259 discharges there were 45 "return" cases, in no instance had the infecting patient suffered from nephritis or albuminuria, although 123 cases of kidney trouble occurred.—I am, etc.,

Bristol, March 3rd. JAMES FLETCHER, M.D., D.P.H., Resident Medical Officer.

THE ORAL EDUCATION OF THE DEAF.

SIR,—In the JOURNAL of March 12th, p. 655, there appears under this heading a notice of a demonstration given by a Mrs. White, of Ipswich, with a deaf girl, and the writer remarks that no doubt experts in oral teaching will seriously consider the possibilities of applying Mrs. White's methods of improving the voice modulations and inflections of their pupils.

It will interest your readers to know that Mrs. White's methods have been tried in the School of the Association for the Oral Instruction of the Deaf, 11, Fitzroy Square, W.—in the first instance during the month of February of last year, and again during the following May, June, and July. A small committee of expert teachers of the deaf and others was formed to appraise the results of the first experiment, and the reports of several members of that committee are to be found in the *Teacher of the Deaf* for May, 1909. In the November issue of that professional journal will be found my report on the May–July experiments.

All I need say here is that Mrs. White is a most energetic and painstaking teacher, but she overstates the value of her method. With regard to the deaf girl with whom Mrs. White is now publicly demonstrating, it should be said that up to last Christmas she was a pupil of this school. She is an exceptionally intelligent and responsive girl, possessing an excellent command of English, wholly gained at Fitzroy Square; indeed, all she knows and can do of practical value she was taught by my teachers. Of course, a few finishing touches may have been given to her speech in the few months since she left school, but no one outside the school has any claim to the credit of having taught her to express herself intelligently in good English and to lip-read what is said to her. Any attempt to underrate the nature and extent of the knowledge gained here will, I am sure, be severely deprecated by all right-minded men.

It should be added that the girl is not a congenital mute, as Mrs. White seems to have stated, for she lost her hearing at the age of 3.—I am, etc.,

11, Fitzroy Square, London, W., March 18th. G. SIBLEY HAYCOCK, Director of the School and College.

THE MEDICAL PARLIAMENTARY ROLL.

SIR,—While looking through Dr. Venn's interesting *Biographical History of Gonville and Caius College*, I have come upon the names of two more medical members of Parliament which should be added to the list already published.

Gostlin, John, M.D.Camb. (Barnstaple, 1614). Dr. Gostlin was Master of Caius and Regius Professor of Medicine in the University. On account of his religious principles (Dr. Gostlin was a Roman Catholic) he was expelled the university, but subsequently recalled, reinstated in his posts, and, at the time of his death, was also Vice-Chancellor. During his period of ostracism he went to live in Exeter, and it was while resident in that city that he was sent by the people of Barnstaple to represent them in Parliament. The Borough of Barnstaple is not mentioned in the Parliamentary Return for the time being, this return being singularly incomplete, the omissions far exceeding in number, the insertions.

Brady, Robert, M.D.Camb., F.R.C.P.Lond. (Cambridge University, 1681–1687). Dr. Brady, like Dr. Gostlin, was both Master of his College (Caius) and Regius Professor of Physic in the University. He received the degree of M.D. by Royal Mandate, and was Physician to both Charles II and James II.

—I am, etc.,

London, W. S. D. CLIPPINGDALE.

SIR,—Dr. Clippingdale, in your issue of February 12th says: "I have always understood that he (James II or VII) was crowned King of the three kingdoms at Westminster and deposed from the same position at the same place." As far as Scotland is concerned, Dr. Clippingdale is in error. James II of England and VII of Scotland was never crowned King of Scotland nor took the Scottish

coronation oath. The Scottish Parliament deposed him on quite different grounds from that of England. The Scottish Parliament sat in Edinburgh. You cannot speak "Britannically" before 1707. The present King was crowned King of Great Britain and Ireland as one kingdom, not three.—I am, etc.,

Glasgow, March 8th. JOHN BROWN, M.D., F.R.F.P.S.G.

CONSULTANT, GENERAL PRACTITIONER, OR HALF-AND-HALF?

SIR,—The naïveté of "Enquirer's" last letter in the JOURNAL of March 19th, p. 725, is delightful.

So the consultant exists solely for the purpose of instructing the general practitioner, either at the expense of the patient, or by publishing papers, etc., whereby "the general practitioners could avail themselves of the special knowledge of which the consultant thereby shows himself possessed."

The general practitioner is now so competent that "a few minutes' conversation with the consultant will make him acquainted with the technique." But, if necessary, "many consultations should take much longer than this (half an hour), so that the consultant can explain fully to the general practitioner what treatment should be carried out." This, I presume, is in cases where the general practitioner is rather less competent; but, alas, the unfortunate patient must pay for this extra instruction, because we are told "the consultant's fees should be raised, and should vary partly with the length of time a consultation takes."

If at first the general practitioner is not successful in carrying out the treatment of a case (which of course is entirely the fault of the consultant's advice!) the experience is useful, and after further practice on more or less similar cases he may become proficient. If not, he can easily get another consultation at the expense of a patient. I know that man, and when I meet him I wonder how many consultations he thinks necessary to qualify him to become a consultant himself. Fortunately, he does not represent the body of general practitioners.—I am, etc.,

March th. EST MODUS IN REBUS.

Universities and Colleges.

UNIVERSITY OF OXFORD.

Radcliffe Travelling Fellowship.

THE electors have appointed Mr. Ernest L. Kennaway, B.M., M.A., Hulme Research Student of Brasenose College.

UNIVERSITY OF SHEFFIELD.

THE Council has appointed Mr. A. Garrick Wilson, F.R.C.S., to the post of Tutor in Surgery, and Mr. Albert E. Bennee, M.B., Ch.B.(Edin.), to that of Junior Demonstrator in the Department of Pathology.

UNIVERSITY OF DUBLIN.

THE following candidates have been approved at the examinations indicated:

FINAL MEDICAL EXAMINATION (*Part II, Medicine*).—*Hilgard Müller, *Marius A. Diemont, *W. P. Smiley, H. R. M. Ferguson, Beatrice Hamilton, C. Pentland, J. W. Tomb, Hans Fleming, A. C. Hallowes, J. H. Crane, C. Grene, E. P. Allman-Smith, V. W. D M'Gusty, E. W. G. Young, C. D. Hanan.

FINAL MEDICAL (*Part II, Surgery*).—J. H. Woodroffe, M. A. Diemont, W. P. Smiley, C. B. Jones, L. Trichard, J. H. Crane, A. C. Hallowes, H. S. Metcalfe, W. R. Watson, C. Pentland, B. H. Moore,

D.P.H. (*Part I.*—H. T. Stack. *Part II.*—W. J. Powell.

* Passed on high marks.

ST. MUNGO'S COLLEGE, GLASGOW.

AT the annual presentation of prizes to the students of St. Mungo's College Medical School Mr. James Macfarlane, who presided, took occasion to refer to the future of the college. The governors believed that the school had still a great work to perform, and thought that the changes proposed as the result of negotiations completed some months ago, and now awaiting the sanction of Parliament, would be of much benefit to the college. It was impossible to say at present whether the new Professors of Medicine, Surgery, Gynaecology, and Pathology would begin their duties next winter session or not, as the university authorities had still ordinances to adjust. Probably St. Mungo's school would have another session on the old basis, and he felt sure the same efficiency would be maintained. Mr. Brown, the secretary, who also spoke, endorsed the view that the extension of the University School of Medicine at the Royal Infirmary would tend to strengthen St. Mungo's College.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary comitia was held at the College on Monday, March 21st; the President, Sir R. Douglas Powell, in the chair.

Membership.

Sir Alfred Keogh was admitted a Member of the College.

Proposed Joint Action with the University of London.

In accordance with a resolution passed at the preceding comitia, the President nominated the following gentlemen to serve on a committee to report on the whole subject at a future comitia: The future President and Sir Wm. Allchin; Drs. Norman Moore, F. Taylor, Ormerod, Sharkey, Hale White, Herringham, Spriggs, Rose Bradford, Wm. Hunter, and Starling.

Harveian Librarian.

A letter was received from Dr. F. Payne, resigning his office as Harveian Librarian. The resignation was received with deep regret, and a cordial vote of thanks passed to Dr. Payne for his valuable services for many years past.

Presidential Address.

The President gave an address in which he referred to the chief events during the past collegiate year, and gave brief biographical notices of the Fellows of the College who had died during that period. In conclusion he thanked the Fellows for their repeated confidence in him during the past five years, and expressed his gratitude to the college officers for their never-failing help and assistance during his term of office.

Sir Wm. Church thanked the President for his address, and moved a resolution requesting him to allow it to be published. A further vote of thanks to the President for his great and valuable services during the past five years was passed with acclamation.

Election of President.

Sir R. Douglas Powell then vacated the chair and voting took place for the office of President for the ensuing year. A first ballot showed that Sir Thomas Barlow had received 57 votes, Dr. Norman Moore 15, Sir Wm. Allchin 14, Dr. Frederick Taylor 12, Sir Clifford Allbutt 10, Professor Osler and Sir Dyce Duckworth 9 each, and that a few other votes were scattered. As no Fellow had received the votes of two-thirds of those present, a second ballot took place between Sir Thomas Barlow and Dr. Norman Moore, when the former received 103 votes. Having taken the chair and given his faith to the College, he received the insignia of his office, and in a brief speech expressed his gratitude to the Fellows for the honour bestowed on him, and his resolve loyally to give his best energies to the work of the College.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship Examination.

THE following candidates, having passed the necessary examination, have been admitted Fellows of the College:

Miss E. R. Benjamin, B.Ch.Dubl.; O. St. J. Gogarty, B.Ch.Dubl.; W. E. Hopkins, B.Ch.Dubl.; J. T. Murphy, B.Ch.Melbourne; C. B. Parley, L.R.C.S.I.

The following candidates have passed the Primary Part of the examination:

L. L. Cassidy, B.Ch.Edin.; H. English (student,) R.C.P. and S.I.; M. J. Hillery (student), R.C.P. and S.I.; K. T. Nath, L.R.C.S. Edin.; C. G. Sherlock, B.Ch.Dubl.

THE APOTHECARIES' HALL OF IRELAND.

THE next quarterly examinations will take place on the following dates: First Professional, April 18th; Second Professional, April 21st; Third Professional, April 25th; Final Professional, April 27th.

THE fifth International Periodical Congress of Gynaecology and Obstetrics will be held at St. Petersburg on September 19th to 24th of the present year, under the patronage of the Czar. The President is Professor Dmitri Oskarovic Ott. All the professors of gynaecology and obstetrics in Russia are members of the organizing committee. The following questions are proposed for discussion: (1) Caesarean section; (2) non-operative treatment of cancer of the uterus; (3) comparative value of the various operative procedures for the treatment of displacements and deviations of the uterus; (4) the vaginal route in delivery and in gynaecology. Communications relative to the congress should be addressed to Professor Sadowsky, Wassilie Ostrow, Ligne de l'Université, 3, Saint-Petersburg.

The Services.

ROYAL ARMY MEDICAL CORPS.

EXAMINATION FOR PROMOTION.

Stations Abroad (Except India).

THE following is the list of successful candidates at the December Examination for Promotion of Majors of the Royal Army Medical Corps in Technical Subjects:

Major B. FORDE, M.B., Sanitation and Epidemiology. Already passed in (*d*) ii, in Army Medical Organization in Peace and War and in Medical History, etc.

Major W. E. HARDY, M.B., Technical Subjects. Already passed in (*d*) ii.

Major F. A. SYMONS, M.B., (*d*) ii; .75. Already passed in Technical Subjects.

Major H. V. PRYNNE, (*d*) ii; .75. Has yet to pass in Technical Subjects.

Lieutenant W. J. E. BELL, M.B., (*h*) iii. Already passed in (*b*), in (*d*) ii, and (*h*) ii.

Lieutenant S. FIELD, (*h*) ii. Has yet to pass in (*b*). Already passed in (*d*) ii and in (*h*) iii.

Lieutenant H. M. J. PERRY, (*d*) ii. Already passed in (*b*) and in (*h*) ii and (*h*) iii.

Lieutenant L. A. A. ANDREWS, (*d*) ii and in (*h*) ii and iii, .75 in (*d*) ii. Already passed in (*b*).

Lieutenant W. R. O'FARRELL, (*d*) ii and in (*h*) ii and iii. Has yet to pass in (*b*).

Lieutenant F. WORTHINGTON, M.B., (*d*) ii and in (*h*) iii. Has yet to pass in (*b*), (*h*) i, and (*h*) ii.

Lieutenant W. H. S. BURNEY, (*d*) ii and in (*h*) ii. Has yet to pass in (*b*), (*h*) i, and (*h*) iii.

NOTE.—In accordance with Army Order 216 of 1909, Lieutenants of the Royal Army Medical Corps who have not qualified in (*h*) ii and (*h*) iii will be required to take up the new Subhead (*h*) i in addition at any subsequent examination in Subject (*h*).

ROYAL ARMY MEDICAL CORPS (TERRITORIALS).

EXAMINATION FOR PROMOTION.

THE undermentioned officers have passed as specified in the examination for promotion held in December last:

Fully Qualified in Military Law, in Organization, Administration, and Equipment, and in Sanitation (for Promotion to the Rank of Captain).—Lieutenant S. ENGLISH, M.B., Royal Army Medical Corps, Territorial Force (attached to the East Lancashire Divisional Engineers); Lieutenant T. H. C. DERHAM, Royal Army Medical Corps, Territorial Force (attached to the 4th Battalion Loyal North Lancashire Regiment); Lieutenant F. K. SMITH, Royal Army Medical Corps, Territorial Force (attached to the 4th Battalion Gordon Highlanders); Lieutenant W. E. ALSTON, M.D., Royal Army Medical Corps, Territorial Force (attached to the 24th (County of London) Battalion the London Regiment); Lieutenant H. S. BEADLES, London Mounted Brigade Field Ambulance; Major W. H. STEPHEN, M.B., and Lieutenant T. H. FORREST, M.B., 1st South Midland Mounted Brigade Field Ambulance; Lieutenant D. C. L. ORTON, Welsh Border Mounted Brigade Field Ambulance; Lieutenants E. V. GOSTLING, G. M. HETHERINGTON, and A. C. YOUNG, 1st East Anglian Field Ambulance, East Anglian Division Field Ambulances; Lieutenants J. ROBERTSON, M.D., and J. D. FIDDES, M.B., 1st Highland Field Ambulance, Highland Division Field Ambulances; Lieutenant J. F. MACINTOSH, 2nd Highland Field Ambulance, Highland Division Field Ambulances; Lieutenants J. M. SMITH, M.B., J. H. HUNTER, M.B., and A. M. DAVIE, 3rd Highland Field Ambulance, Highland Division Field Ambulances; Lieutenant W. F. MUNRO, M.B., 2nd East Lancashire Field Ambulance, East Lancashire Division Field Ambulances; Lieutenants C. H. LINDSEY, M.D., J. E. W. MACFALL, M.D., R. S. TAYLOR, M.B., and A. P. H. SIMPSON, 1st West Lancashire Field Ambulance, West Lancashire Division Field Ambulances; Lieutenants C. S. BREBNER, M.D., W. MACDONALD, M.B., and W. L. HAWKSLEY, M.B., 2nd West Lancashire Field Ambulance, West Lancashire Division Field Ambulances; Lieutenant R. E. BICKERTON, M.B., 2nd London (City of London) Field Ambulance, 1st London Division Field Ambulances; Lieutenant B. E. POTTER, M.B., 3rd London (City of London) Field Ambulance, 1st London Division Field Ambulances; Lieutenants J. BUCKNER and P. J. MCGINN, 1st Welsh Field Ambulance, Welsh Division Field Ambulances; Lieutenants D. E. EVANS, E. BRICE, and G. D. E. JONES, 3rd Welsh Field Ambulance, Welsh Division Field Ambulances.

Fully Qualified in Medical Organization of the Territorial Force, in Sanitation and Epidemiology, and in the Laws and Customs of War (for Promotion to the Rank of Lieutenant-Colonel).—Major C. H. HOWKINS, 1st South Midland Field Ambulance, South Midland Division Field Ambulances; Major A. B. SOLTAU, M.D., 2nd Wessex Field Ambulance, Wessex Division Field Ambulances.

THE R.A.M.C. AND I.M.S.

JUSTITIA writes that in comparing the two services—the R.A.M.C. and the I.M.S.—it should be remembered that, whereas officers of the I.M.S. all become lieutenant-colonels after twenty years' service, many, at least a third, of their brother officers in the R.A.M.C. will now never attain to that rank, but will after twenty five years' service be forced to retire as majors. They will have the two-fold chagrin of seeing officers in the I.M.S. much their juniors in point of service their seniors in rank, and perhaps their commanding officers; and also of being forced to retire early on a small pension through no fault of their own, although they may have passed for promotion to the rank of lieutenant-colonel.

Obituary.

ERNEST HERBERT COBB, M.R.C.S., L.R.C.P.,

HONORARY SECRETARY AND TREASURER, BEDFORD AND HERTS DIVISION, BRITISH MEDICAL ASSOCIATION.

ERNEST HERBERT COBB was born on October 10th, 1860 at Margate. The eldest son of James Francis Cobb, he was a very delicate child, and there were many occasions during his earlier years when his life was almost despaired of. Later he grew stronger, and although he was never able to profit by regular school life, he showed an early fondness for mechanical and scientific pursuits. His health, however, again prevented him from seriously taking up any profession at the age when most men commence their career. For a few years he lived at Margate, and took part in the work of the old-established family bank founded by Francis Cobb in the middle of the eighteenth century. This work, however, was never congenial to him, and he soon went abroad and studied languages and music at Dresden for three years, making himself thoroughly proficient in the German language. Returning to England much stronger in health, he determined, though then 30 years of age, to prepare himself for the medical profession. He entered St. Thomas's Hospital and took the diplomas of M.R.C.S., L.R.C.P., in 1897, and was House-Surgeon to Mr. Clutton. At the conclusion of this appointment he took up work at the Victoria Hospital, Folkestone, but, marrying soon afterwards and being of independent means, he gave up practice and settled down in Stevenage in 1900. He became a very enthusiastic member of the Bedford and Herts Division of the South Midland Branch of the British Medical Association, and in 1907 was appointed Honorary Secretary, in place of Dr. Savory, who had resigned. He was a most regular attendant at the meetings, and, indeed, proved himself an ideal secretary. He was an enthusiastic motorist, and was well known in the district for his courteous consideration of other road-users. On February 4th he developed bronchitis and subsequently pneumonia and pericarditis, from which he died on February 14th.

Dr. S. J. Ross, Vice-Chairman of the Division, writes: As a member of the Division who has had frequent correspondence with the late Dr. E. H. Cobb on matters connected with the work of the Division, I should like to testify to the marked ability with which he conducted his secretarial duties. Although not engaged in active practice he possessed a keen appreciation of the difficulties which beset the general practitioner. He was an enthusiast in the work of the Association. Possessing a kindly, genial nature he endeared himself to all the members of this Division. The Division has lost a capable officer, and the Association an enthusiastic member and supporter.

LIEUTENANT-COLONEL J. P. H. BOILEAU, A.M.S.(RET.),

FORMERLY ASSISTANT PROFESSOR OF PATHOLOGY, NETLEY.

LIEUTENANT-COLONEL BOILEAU, A.M.S (Ret.), who was from 1876 to 1883 Assistant Professor of Pathology at the Army Medical School, Netley, died at his residence near Trowbridge on March 4th. He was taken ill on March 1st with abdominal symptoms, and, though an operation was performed, sank from peritonitis.

John Peter Hamilton Boileau was born on April 9th, 1841, and was the son of the late Lestock Francis Boileau, R.N., Inspecting Commander of Coastguards. He was educated at Trinity College, Dublin, and graduated B.A. in 1863, M.B. in 1864, and M.D. in 1873. In 1873 he became a Licentiate, and in 1874 a Fellow, of the Royal College of Surgeons in Ireland, and in the last-named year took also the Diploma in Public Health. He had a very successful career as a student, winning many prizes not only in medical subjects but also in physical science at the Government School of Mines, and in geometry at the Royal Dublin Society. He joined the Army Medical Service, and was for twelve years medical officer of the 29th (Worcestershire) Regiment. During his forty-two years in the service he

served a good deal abroad, among his appointments being that of medical officer in charge of the station hospital, Meerut; he was afterwards appointed to the medical charge of troops at Trowbridge, an appointment which he held until 1906, when he finally retired. He was a member of the Committee of the Council of the British Medical Association from 1881 to 1883, a member of the Council of the Irish Medical Schools' and Graduates' Association from 1898 to 1902, and a Fellow of the Royal Statistical Society. He wrote a work on the sphygmograph, and an essay on the statistics of the Army Medical Department, and also contributed many papers to the medical journals.

Colonel Boileau married a daughter of the late Dr. Bond of Dublin, and is survived by his widow and three daughters. The funeral took place on March 8th at Limpley Stoke churchyard. Colonel Boileau had a large circle of friends not only in the Army Medical Department but amongst members of the British Medical Association, and his career reflected honour both upon himself and upon the branch of the profession to which his life was devoted.

DR. GARLAND died on the evening of March 11th, at his residence in Leith. His health had been indifferent for some time, but he was attending to his professional duties until within a few days of his death. The son of the late Bailie Garland, of Leith, Ormond Haldane Garland graduated M.B., C.M., at the University of Edinburgh in 1868. He was admitted a Member of the Royal College of Physicians in 1876, and was elected a Fellow in 1886. In 1888 he took his M.D. degree. He was Visiting Medical Officer for the John Watt Trust. In the early Seventies he was appointed Surgeon to the Leith Police Force, an appointment he held until his death. For nearly a quarter of a century he was ambulance instructor to the Leith Police. He was at one time Lecturer on Clinical Medicine in the School of Medicine for Women, and was till lately Senior Visiting Physician to Leith Hospital. He was held in high esteem by his patients in Leith and the Edinburgh district. He is survived by his wife.

DR. ALEX. CRAIG (Pathhead, Ford), who died on March 1st, was an M.D. of Glasgow, and for the past thirty-five years had a large and varied practice in Pathhead. He was a skilful surgeon, acted as Physician to the Edinburgh Children's Holiday Home at Humbie, and was medical officer of health for several parishes. Caring little for public life, Dr. Craig was of quiet and unobtrusive disposition. He recently underwent an operation, from the results of which he never rallied. He is survived by a widow, four sons, and one daughter. Two of the sons are in the medical profession.

BRIGADE SURGEON EDWARD JOSEPH BOULTON, late of the Army Medical Staff, died in London on March 13th. He was the son of the late Captain Thomas Boulton, 5th Dragoon Guards, and joined the Army Medical Department in January, 1862, retiring from the service with the honorary rank of Brigade Surgeon in 1886. He had, moreover, served as an Acting Assistant Surgeon during the Russian war in 1855, with the expedition to the Baltic, receiving a medal. He also took part in the Zulu war in 1879, and was present at the battle of Ginginhlovo and at the relief of Etshowe, receiving a medal with clasp.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Professor Giovanni Bezzi, sometime head of the Surgical Clinic at Modena; Dr. von Roth of Stuttgart, a well-known orthopaedic surgeon, aged 80; Dr. Ogala, of Osaka, one of the leading practitioners of Japan, Physician to the Imperial Family, and founder of the Japanese Red Cross, and of the Medical School and Hospital at Osaka, aged 67; Dr. Eduard Pflüger, the last of the assistants of Johannes Müller, and successor of Heimholtz in the Chair of Physiology at Bonn, aged 80; Professor de Semo, sometime Senior Physician to the Pisa Hospital, afterwards a leading physician at Alexandria, where he was Secretary of the Egyptian Antituberculosis League; and Dr. J. M. Bandera, Professor of Physiology in the University of Mexico.

Medico-Legal.

WORKMEN'S COMPENSATION ACT.

The Definition of an "Accident."

JUDGEMENT was given in the House of Lords on March 14th in an important appeal under the Workmen's Compensation Act. The appeal was heard by the Lord Chancellor, Lord Macnaghten, Lord Atkinson, Lord Collins, and Lord Shaw.

The appellants were a firm of engineers at Birkenhead, and the respondent the widow of one of their workmen. The question was whether the death was due to an accident arising out of or in course of his employment. Respondent was the wife and sole dependent of Edward Hall Hughes, who was in the employment of Glover, Clayton, and Co., Limited. Hughes on March 9th, 1907, was engaged, with the assistance of a fellow-workman, named Connell, in making a condenser bath, the sides of which had to be tightly screwed together by means of bolts. When Hughes was in the act of tightening a nut with a spanner, pressing down and putting his weight on it, he made an exclamation, fell on his back, striking his head, and on being taken aside was found to be dead. On *post-mortem* examination it was found that there had existed a very large aneurysm of the aorta, and that death had been caused by its rupture. The aneurysm was in such an advanced condition that it might have burst while the deceased was asleep, and a very slight exertion or strain would have been sufficient to bring about a rupture. The judge of the Liverpool County Court made an award of £300 in favour of the widow. The employers carried the case to the Court of Appeal, where the Master of the Rolls, Lord Justice Farwell, and Lord Justice Kennedy upheld the award.

In giving his decision in the House of Lords, the Lord Chancellor said: In what I am about to say I take the facts as the county court judge found them *in extenso* and rely upon them. He has held, and the Court of Appeal have confirmed his decision, that in these circumstances the workman's dependants are entitled to compensation. I agree. The injury must be caused by an accident, and the accident must arise out of the employment. We are not concerned here with the course of the employment. What, then, is an "accident"? It has been defined in this House as "an unlooked-for mishap or an untoward event, which is not expected or designed." All the Lords who took part in the decision of Fenton *v.* Morley agreed in substance with this definition in Lord Macnaghten's speech. I take this as conclusive. Next, the accident must be one "arising out of" the employment. There must be some relation of cause and effect between the employment and the accident, as well as between the accident and the injury. Some of the difficulties in applying the Act are due to the fact that courts of law have frequently been obliged to consider, especially in actions on policies of insurance, what is to be regarded as the cause of some particular event. In one sense every event is preceded by many causes. This man died from the rupture of an aneurysm, and "the death was caused by a strain arising out of the ordinary work of the deceased operating on a condition of body which was such as to render the strain fatal." Again, "the aneurysm was in such an advanced condition that it might have burst when the man was asleep, and very slight exertion or strain would have been sufficient to bring about a rupture." The first question here is whether the learned judge was entitled to regard the rupture as an "accident" within the meaning of this Act. In my opinion he was so entitled. Certainly it was an "untoward event." It was not designed. It was unexpected in what seems to me the relevant sense—namely, that a sensible man who knew the nature of the work would not have expected it. I cannot agree with the argument presented, that the court is to ask whether a doctor acquainted with the man's condition would have expected it. Were that the right view, then it would not be an accident if a man very liable to fainting fits fell in a faint from a ladder and hurt himself. No doubt the ordinary accident is associated with something external; the bursting of a boiler, or an explosion in a mine, for example. But it may be merely from the man's own miscalculation, such as tripping and falling. Or it may be due to both external and internal conditions, as if a seaman were to faint in the rigging and tumble into the sea. I think it may be due also to something going wrong within the human frame itself, such as the straining of a

muscle, or the breaking of a blood vessel. If that occurred when he was lifting a weight, it would be properly described as an accident. So, I think, rupturing an aneurysm when tightening a bolt with a spanner may be regarded as an accident. It cannot be disputed that the fatal injury was in this case due to this accident, the rupture of the aneurysm. That of itself does not dispose of the case. It establishes that there may have been an injury by accident caused to the workman. But it does not establish that the accident was one "arising out of the employment." It is in these words that the stress of the case mainly lies. When the man's condition was such that he might have died in his sleep, and the mere tightening of the nut with no more strain than ordinary in such work caused the accident, can it be said that the accident was one "arising out of" the employment? That seems to me to be the crucial point. I do not think we should attach any importance to the fact that there was no strain or exertion out of the ordinary. It is found by the county court judge that the strain in fact caused the rupture, meaning, no doubt, that if it had not been for the strain, the rupture would not have occurred when it did. If the degree of exertion beyond what is usual had to be considered in these cases, there must be some standard of exertion, varying in every trade. Nor do I think we should attach any importance to the fact that this man's health was as is described. If the state of his health had to be considered, there must be some standard of health varying, I suppose, with men of different ages. An accident arises out of the employment when the required exertion producing the accident is too great for the man undertaking the work, whatever the degree of exertion or the condition of health. It may be said, and was said, that if the Act admits of a claim in the present case, every one whose disease kills him when at work will be entitled to compensation. I do not think so, and for this reason: It may be that the work has not, as a matter of substance, contributed to the accident, though the accident happened while he was working. In each case the arbitrator ought to consider whether, in substance, as far as he can judge on such a matter, the accident came from the disease alone, so that whatever the man had been doing it would probably have come all the same, or whether the employment contributed to it. In other words, did he die from the disease alone or from the disease and the employment taken together? Looking at it broadly and free from overnice conjectures, was it the disease that did it or did the work he was doing help in any material degree? In the present case I might have come to a different conclusion on the facts had I been the arbitrator, but I am bound by the findings, if there was evidence to support them. It is found that the strain contributed to the death. There was evidence on which the learned judge was entitled so to find, as I respectfully think, and I, therefore, advise your lordships to affirm the order of the Court of Appeal.

Lord Macnaghten and Lord Collins concurred with the Lord Chancellor.

Lord Atkinson could not concur with the judgements which had been given, and, after reviewing the circumstances of the case, he said: The only two conclusions to which I think any reasonable man could come on that evidence are—(1) That the natural termination of the disease, rupture, was reached unaffected by the work deceased was doing; (2) or that the work accelerated that termination. The strain was very slight; it could not have been slighter, if he was to do any work at all. The rupture was, as I have said, the certain or the highly probable result of the slightest muscular exertion. It may not have been looked for or expected by the deceased, his employers, or his fellow workmen. There is no evidence that he or they knew, or suspected, what his condition was; but the ignorance of such people on this point cannot turn, I think, the inevitable, or highly probable, result of a disease or hidden condition of body into an "accident." Neither can, in my opinion, the fact that the final catastrophe consisted in the rupture of a tissue, if that catastrophe be known to be the certain, or highly probable, result of the malady. In order that the "mishap" should be "unlooked for," or the event "be unexpected," so as to make "an injury by accident" within the meaning of this Act, the mishap must, I think, be "unlooked for," or the "event" be "unexpected" by some person with knowledge of the facts and capable of judging reasonably of them. The death of the deceased was, it appears to me, no more an accident than if, had he been a butler, he had died walking slowly up the stairs of the house in which he served, or, had he been a coachman, he had died while slowly mounting on his box. It may possibly be that it would be better, in the interests of workmen, that they should be entitled to compensation for all injuries which arise out of and in the course of their employment however caused, though that is far from clear, since it might result in depriving of employment all who were in any way unsound, or past their prime; but while the word "accident" remains in the statute, force and meaning must be given to it in construing the statute, and much as one may sympathize with the claimant, I for my part am unable to see that anything which was not normal and most probable, if not certain, befell the deceased, and that there was, therefore, no evidence upon which the county court judge, as a reasonable man, could legitimately find as he has found. I therefore think the appeal should be allowed.

Lord Shaw, after alluding to the facts of the case and the decisions in the lower courts, and quoting authorities in favour of his opinion, said: Where disease is a result brought about by the employment itself—such as that of lead workers—those cases are specially and separately dealt with as diseases, and what I may call liability on the employment is imposed. Nothing could more clearly indicate that in the passing of this Act Parliament did not mean, at least in the ordinary case, to include such cases within the category of accidents. In my opinion, in the present case it is impossible for me to attribute this unfortunate and afflicted workman's death to injury by accident, as such a pronouncement, however prompted by compassion for those bereaved, would be erroneous in fact, and involve a liability which is not imposed either by the language or in the intention of the statute. Nor do I think it altogether without a bearing on the sound construction of the statute, that if a different interpretation be put upon the words cited, then a new peril will have been introduced into the lives of many workers, who, notwithstanding debility and chronic disease, are most anxious and willing to devote their remaining powers to earning an independent livelihood. Should such persons be held to carry with them into and upon employment the serious and additional liability alluded to, employment may become for such persons, often the most needy and deserving of the population, more difficult to obtain. I accordingly tender my dissent from the conclusions reached by the majority of your lordships.

The appeal was thus dismissed by three to two.

Finality of Medical Referee's Reports.

A COLLIER injured his back on August 10th, 1908, and was paid compensation at the rate of £1 a week down to April 17th, 1909, when the company contended that he had recovered and was fit for his ordinary employment; he was examined by the medical referee, who on October 20th reported that he was in a sound condition of health and fit for his ordinary work. The man returned to work, but stopped again on November 21st, alleging that he was unable to continue owing to the original injuries he received. The Sheriff of Dunfermline found that while the medical referee's report was conclusive as regarded the collier's condition on October 20th, 1909, that did not debar him from proving that he was again incapacitated on November 21st. He awarded him compensation at the rate of £1 a week down to February 7th, 1910, except for the period in November when he was at work. Being now again at work as fireman, the collier was entitled to partial compensation, with the expenses of the action.

Neglect of Treatment.

A charwoman broke her arm near the wrist in the course of her occupation on December 19th, 1908. She drew compensation for about a year; an application was then made to the Sheriffs' Court in Glasgow to end it. It was admitted that at the date of the hearing her arm was still too stiff to enable her to resume her full work, and it was contended that the Sheriff should consider her condition at that date. Sheriff Mackenzie of Glasgow, before whom the case was heard, decided, on the authority of the medical referee, "that the stiffness was due to her having neglected to properly exercise the arm; had she done so she would have been fit for her full work." He therefore ended the compensation.

Accident or Pleurisy?

In a case heard at Wigan (March 4th) it appeared that a pitman, while engaged with another man in pushing tubs, slipped and hurt his back. Upon his making a claim, it was alleged by the employer that he was really suffering from pleurisy, and that this was the cause of his disablement. The county court judge said that even if a man had pleurisy, and was weak on that account, and an accident supervened, and that developed and brought out something which was latent before, he could recover compensation. In his Honour's view that was what happened in this case, and there would be an award for the amount claimed with costs.

Accident and Lunacy.

In a case heard at Cardiff (March 4th) it was alleged that the applicant for compensation had become lunatic owing to an accident. It was proved that in August, 1909, he was struck on the head by a heavy weight. As a result he was paid compensa-

tion down to September 14th, when he became insane. Evidence was given at the hearing to show that head injuries caused only 2 per cent. of cases of insanity. In the event the county court judge refused to award compensation for the lunacy, as he held it was not caused by the accident.

Alleged Poisoning by Carbon Monoxide.

In a case heard at Crewe (March 3rd) it appeared that the husband of the applicant had been a gasfitter. When he was testing a gas meter there was an explosion. He died a week later. On the hearing of a claim for compensation, Dr. Hodgson and Dr. Martlew attributed death to cerebral haemorrhage caused by carbon monoxide poisoning. Dr. Lawrence, however, who gave evidence for the respondents, said that death was due to natural causes. The judge found, upon the evidence, that the death was due to natural causes. He was impressed by the statement that if the death had been due to carbon monoxide there would have been immediate haemorrhage, whereas, in fact, it did not occur until three days after the explosion.

A Claim in Respect of Nystagmus.

In a case recently heard at Sheffield it appeared that the applicant had been working below ground for about ten years. He then had to leave the pit, owing to a disease of the eyes, and was subsequently sent to hospital. After three months he returned to the pit, where he worked for about eight months, and then again had to leave, as the complaint returned. Compensation was paid for about nine months, when the employers stopped it, as they thought the applicant could return to work. Mr. Constable Hayes, F.R.C.S., of Leeds, giving evidence for the applicant, said that if he went back to work the nystagmus from which he was suffering would become much worse, and in a few months he would be wholly incapable. According to his experience, in 50 per cent. of the men who had had the complaint there was a recurrence after the first attack. Dr. J. Broadley, who was called on behalf of the employers, said that when he examined Vickers he perceived no movement of the eyes, and thought he was fit to resume work in the mine. If the disease were allowed to go on it would become chronic, but by that time the patient might not be inconvenienced by the movement of the eyes, and might be able to do his work quite well. He admitted, however, that constant work in the mine would probably make the disease chronic. Eventually an award of 10s. a week was made on the footing that the applicant was capable of doing the work of an ordinary labourer at 20s. a week.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee, except when so stated.

THE OBLIGATIONS OF A CONSULTANT.

D. M.—B. sees X. in consultation with A.; three months later X. asks B. to attend Mrs. X., but he declines except in consultation with A. X. argues that A. has never attended Mrs. X., and that she is therefore at liberty to choose B. as her medical attendant.

*** The answer to X.'s argument is that B. was introduced to the family by A., and that this invitation has arisen out of that introduction as a consultant; therefore he cannot in justice to A. accept any of the household as his patients, at any rate so soon after that introduction. The shortness of the interval is important as indicating the close connexion between B.'s visit as a consultant and the request to attend. It is expressly to prevent consultants or substitutes taking advantage of such introductions that the rule under which B. should decline the case has been established.

CONDITIONS OF INTRODUCTION.

BETA asks the following questions: (1) In the sale of a medical practice what is the usual length of introduction? (2) What is the custom as to the sharing of earnings during introduction? (3) What is the relation between the length of introduction and the amount of premium paid?

*** (1) The length of introduction is very variable, and must be settled in the agreement at the time of sale. A very common period is six months.

(2) During the period of introduction the profits are: (*a*) shared equally between vendor and purchaser; or (*b*) for the first half of the time the vendor takes all the receipts and pays all expenses, and for the last half the purchaser; or (*c*) one of them takes all profits, paying all the expenses, and making an allowance to the other.

(3) There is no necessary relation between the length of introduction and the amount of premium paid, except that where the practice is exceptionally valuable, the time of introduction is usually longer, as the vendor would require a longer time to introduce his successor properly.

Public Health AND POOR LAW MEDICAL SERVICES.

INDUSTRIAL EMPLOYMENT OF WOMEN AND INFANTILE MORTALITY.

DR. JOHN ROBERTSON (M.O.H. Birmingham) has issued an extremely valuable report on the effect of the industrial employment of women upon infantile mortality. Two wards of the city of Birmingham, the conditions of life in which indicated the existence of a high degree of squalid poverty, were chosen for investigation. From January 1st to December 31st, 1908, practically every baby born was visited by Dr. Jessie Duncan, and subsequently at frequent intervals by Dr. Duncan or an experienced health visitor. At one of these visits an elaborate schedule of inquiry was filled in, and at the age of 12 months each baby was weighed. The report is devoted to an analysis of the statistics collected in this way.

The mortality among the infants born n these wards of all mothers employed either before or after childbirth was at the rate of 190 per 1,000 births, among those not industrially employed it was 207 per 1,000 births. These figures would appear at first sight to support the paradoxical conclusion that the industrial employment of the mother was in itself a good thing for the child, but Dr. Robertson shows how little warrant such an inference would have. He remarks:

> I think it is probable that, in considering the class of women dealt with in this investigation, there are other points which have an even greater influence on infant mortality than the working of the mother. In many cases the additional income brought in by the mother had an important influence in the prevention of poverty, which is one great cause of a high infant mortality. Again, a certain natural selection may have operated, many women who go to work being thrifty and energetic, and determined not to get below the poverty line, nor yet to neglect their home duties.

That, other things being equal, industrial employment of mothers is likely to be deleterious to the children seems to follow from the observation that 75 per cent. of the not-employed mothers suckled their children up to the age of 6 months, while only 27 per cent. of the employed did so. The relation between breast feeding and weight is indicated by the following table:

	Number Weighed.	Average Weight at 12 Months.
Breast-fed for six months	466	18.01b.
Partially breast-fed for six months... ...	177	17.2 lb.
Bottle-fed	173	17.2 lb.

It is a pity that the "probable errors" of these means are not given as the differences are not large. If, however, the generally observed higher death-rate from summer diarrhoea among bottle-fed as compared with breast-fed children is maintained among these children, the harmful effect of maternal employment would be established.

The influence of poverty is suggested by the following table, although here again the remark with regard to the "probable error" is applicable.

	Number Weighed.	Average Weight at 12 Months.
Father out of work	107	17.6 lb.
Total income less than 10s. per week ...	52	16.8 lb.
Total income 10s. to 20s. per week	303	17.5 lb.
Total income 20s. to 30s. per week	300	18.3 lb.
Total income over 30s.	39	18.8 lb.
Illegitimate children: no income at first visit	15	18.01b.

The general conclusions drawn by Dr. Robertson are that the influence of industrial employment is largely masked by the general state of poverty; but that, so far as the investigation goes, the type of industrial employment in vogue does not appreciably influence the health of the mother or her infant when the standard of comparison is that of women in equally poor circumstances but not so employed.

This interesting study is worthy of close attention by those interested in the problems of industrial life, and is an example of valuable work done by the Public Health Service, and too often disregarded by the politicians and reformers of the market place.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Reigate Rural District.—In estimating the population at the middle of 1909 at 19,720, the medical officer of health, Dr. A. E. Porter, has taken into account the addition to the population of about 740 persons consequent upon the opening of the county asylum at Netherne. The birth-rate was 19.7 per 1,000, and the adjusted death-rate 9.5 per 1,000. The infantile mortality-rate was equal to 56 per 1,000 births. In 1905 this rate was 55 per 1,000. The district council very wisely decided during the year to adopt many of the sections of Part II of the Public Health Acts Amendment Act, 1907. It is to be regretted that they decided, contrary to the advice of a committee of the council, not to adopt section 25, which provides for the paving or covering with some impervious material of back yards. The Local Government Board sanctioned the adoption of the sections selected by the council on condition that section 33 was included. This section exempts from the Act certain buildings belonging to railway companies and other bodies.

Patrington Rural District.—Based on an estimated population of 7,021, the birth-rate in the rural district of Patrington, in the East Riding of Yorkshire, was 26.2 per 1,000 and the death-rate 13.1 per 1,000. The medical officer of health, Dr. W. H. Coates, states that the infantile mortality was 10. By this he apparently means that the number of children who died under 1 year old was 10. The infantile mortality-rate as usually calculated was equal to 54 per 1,000 births—a remarkably low rate. During the year Dr. Coates successfully prosecuted under the Children Act the parents of a child who was sent to school in a filthy condition. The father was sent to prison for three months and the mother for four months. The district council may be well advised if they give effect to the advice of their medical officer of health and provide for the flushing of the drain in the Patrington parish. The drainage system appears to be good, but it must be a menace to the health of the inhabitants if there is no means of flushing.

East Stow Rural District.—The birth-rate in 1909 was 26 per 1,000 and the death-rate adjusted for residents and non-residents was 12.3 per 1,000, the population of the district being estimated at 5,815. The infantile mortality rate was equal to 71 per 1,000 births. Of the 11 children who died under 1 year old as many as 9 only lived 14 days. The medical officer of health, Dr. Charles W. Low, describes the cottage accommodation as very poor, the houses being mostly badly built, damp, and insufficiently ventilated. In the parish of Old Newton there was an outbreak of scarlet fever, lasting from November, 1908, until June, 1909, in which, out of a population of 619 persons, 67 were attacked. There does not seem to be any isolation hospital in the district.

Thedwastre Rural District.—Based on an estimated population of 8,840, the birth-rate in 1909 was 22.3 per 1,000, and the death-rate adjusted for residents and non-residents was 10.9 per 1,000. The infantile mortality-rate was equal to 80 per 1,000 births. Of the 16 children who died under 1 year old, 8 did not live fourteen days. The house accommodation for the working classes is described by the medical officer of health, Dr. Charles W. Low, as, on the whole, very unsatisfactory. Many of the houses have only two bedrooms and are overcrowded. Privy vaults are the usual form of sanitary accommodation and are a fruitful source of evils, chief amongst them being the pollution of water supplies.

DISTRICT MEDICAL OFFICER'S APPOINTMENTS: THE CONSCIENTIOUS OBJECTOR.

SEA SERPENT asks: (1) Whether the Local Government Board would confirm his appointment as medical officer to a second district (one adjoining his own) where there is now a vacancy; if appointed he would not be a resident therein. (2) Can a man who is 20 years of age legally sign a conscientious objection form of vaccination for his child?

*** (1) The Local Government Board before confirming such an appointment would, we believe, require the reasons for a non-resident being appointed. If there should be no such resident willing to accept the vacant appointment consent would probably be given, but this might be delayed or refused if the area of the two districts together exceeded 15,000 acres or contained a population exceeding 15,000 persons. (2) We believe that a conscientious objection *properly tendered by the father* would entitle him to claim a certificate of exemption from vaccination for his own child.

Medical News.

THE King has been pleased to grant to Mr. Alexander A. W. P. Murison, M.B., of the Deaconesses' Hospital, Cairo, permission to accept the Fourth Class of the Order of the Red Eagle, conferred upon him by the German Emperor, and to Mr. Edwin R. Wheeler, M.B., Ch.B., formerly Medical Adviser to the Kanagawa Prefecture, permission to accept the Third Class of the Order of the Sacred Treasure, conferred upon him by the Emperor of Japan.

THE Lord Lieutenant has appointed Dr. J. O'Connell Redmond, F.R.C.S.I., to the Commission of the Peace for the Borough of Dublin.

DR. A. T. BRAND, late Public Vaccinator, Driffield District, Driffield Union, has been awarded the Government extra grant for efficient vaccination for the tenth consecutive time.

IN the note published last week on the international expedition to Teneriffe it should have been stated that one of the members of the expedition is Dr. C. Gordon Douglas, of St. John's College, Oxford.

THE Japanese Ambassador will unveil a tablet over a bed at the Dreadnought Hospital, Greenwich, on Wednesday, April 13th. His Excellency will be received at the hospital by the president, the Duke of Marlborough.

THE Partick Medical Society brought its winter session to a close on March 10th by the annual business meeting. There have been discussions on friendly societies, the medical inspection of school children, the relationship of the British Medical Association to local medical societies, and other subjects. At the business meeting it was announced that the new debt collectors were conducting their business with conspicuous success. The society's funds are in a very satisfactory condition, and the membership continues to embrace practically all the practitioners in the district. A most successful smoking concert was held, and arrangements are being made for a summer outing, which it is hoped will receive the support it deserves.

THE programme of the International Congress and Exhibition of Physiotherapy, which is to be held in Paris from March 29th to April 3rd, has already been published in the JOURNAL of November 6th, 1909. It may interest some of our readers to know that reductions of fares will be granted by the railway companies to members or associates and their families who attend the Congress. The South-Eastern and Chatham Railway will issue their tickets from March 25th until April 2nd at Charing Cross booking office, via Dover and Calais, and via Folkestone and Boulogne, at 58s. 4d. first-class return fare to Paris, instead of 95s. 9d., and at 37s. 6d. second-class instead of 69s. 10s. The London, Brighton, and South Coast Railway will issue their tickets at Victoria or London Bridge Stations, via Newhaven and Dieppe, at 39s. 3d. first-class return fare to Paris, instead of 66s. 3d., and 30s. 6d. second-class return fare to Paris instead of 47s. 1d. The tickets will be available by day or night services. The tickets of both companies will be valid for one month. Full information may be obtained on application to M. H. Saunion, delegate, 19, Bartholomew Close, E.C.

MR. BENJAMIN WEIR, who died in February, 1902, bequeathed certain freehold houses in Balham and Streatham and the residue of his estate, the whole amounting in value to over £100,000, for the purpose of establishing a hospital or other medical charity, to be called the Weir Hospital, for the benefit of the inhabitants of the parish of Streatham and the neighbourhood. The trustees, considering it to be impracticable to carry out the specific provisions of the will and relying upon the general provisions, applied to the Charity Trustees to settle a scheme for the administration of the charity. The commissioners accordingly made an order directing that the house at Streatham should be used as a home for a staff of trained nurses whose services would be available for all the inhabitants of Streatham and the neighbourhood, and the other house as a dispensary, and that the surplus income arising from the remainder of the endowment not required for the maintenance of the nurses' home and the dispensary should be applied to enlarging and supporting the Bolingbroke Hospital on condition that the name of that hospital was changed to the Weir and Bolingbroke Hospital. The Wandsworth Borough Corporation applied to the Chancery Division to set aside this order, on the ground that the money being intended for a hospital at Streatham the order was a grave diversion of the funds to objects not contemplated by the testator. The court refused the application, holding that the words in the trust deed, "Streatham and the neighbourhood," were sufficiently fulfilled by the order.

Letters, Notes, and Answers.

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☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

RHEUMATOID, who lately heard of the treatment of rheumatoid arthritis by means of blisters over the spine, asks for details of this treatment for personal trial, or for references to any publication where the treatment is described.

W. C. R. asks for information on the subject of hereditary cataract affecting the horse, and the age it usually makes its appearance. He asks in connexion with a horse 11 years old which has frequently passed the veterinary examination at various shows.

CARUNCLE desires to hear of a soothing application which can be used in a very painful case of vesical caruncle in a lady aged 40. On three occasions the growth has been freely removed with knife and cautery, but returns again in three or four months. The pain is very severe on standing, but is bearable in a sitting posture. Cocaine ointment (10 per cent.) has been almost constantly used for a year. It relieves, but gives rise to toxic symptoms.

HOME FOR IMBECILE GIRL.

W. J. S. L. wishes to hear of a home for an imbecile girl, aged 11 years, whose father died recently; her mother cannot leave her to go out to work, and is quite unable to pay anything towards her keep.

*** If the patient lives in the county of London admission can be obtained for her to Darenth Asylum through the guardians of the parish. Application should be made through the relieving officer for the district.

NON-CRIMINAL INEBRIATES.

PUZZLED asks for advice in the management of a case of a lady addicted to the use of narcotic drugs and alcohol who lives in a flat and refuses to have any relation with her. She has been found on various occasions comatose from drink or drugs, and on one occasion set her bed on fire by upsetting a candle. Her present trained nurse is trustworthy, but the patient still obtains narcotics; previous nurses have been dismissed at a moment's notice. Her friends would gladly place her under control, but the patient, who is sane, will not give her sanction. Our correspondent asks what he can do.

*** Assuming that all the known relevant facts are stated, the person referred to seems to be, as yet, what is legally termed a non-criminal inebriate who also refuses restraint. True, her voluntary reduction to a'coholic coma and once setting her bed afire by an accident to a candle indicate dangers to herself; but if it be correct that she is sane these facts do not seem to legalize forcible interference. Persuasion might possibly succeed. Were she insane, whether from drink or not, interference could be immediately enforced. The case well illustrates the defective reach of the relevant Acts.

CHEAP SURGERIES IN POOR DISTRICTS.

FUTURUS asks for opinions on the following statement: Recent letters are an indication of what many medical men feel with regard to the profession. There is no doubt that general practice is undergoing a great change—an evolution—but there is some doubt as to how it is going to end. I have more than once heard the opinion expressed that the general practitioner is dying out, and that in another generation or so doctors will be of two classes—the specialist or consultant, and the surgery man who charges small fees and sees a great many patients in a poor district. If that be true—and it seems not unlikely, at least in some places—then it follows that the general practitioner, with a diminishing income and no private means, must choose between one of the other two classes, or starve. Now let us look facts in the face, without any false bias as to professional dignity. The hospitals are intended for people who can pay nothing. There are large attendances in the out-patient departments, and the patients receive as much attention as their cases require. Then there is another class, found in abundance in all large centres of population, who can pay a little, but not fees from 2s. 6d. upwards. Who is to attend to their ailments? They do not want charity; they are willing to pay in proportion to their means; and they are able to put their money down.

Now, is there any reason why a private practitioner who is not busy enough in the district where he happens to live should not devote some hours of his day in a surgery in a poor neighbourhood, and make what he can in small ready fees? I was brought up to consider such a practice as beneath the dignity of a respectable man, and was supported in this view by the fact that some such doctors were heavy drinkers, and unfitted for any practice. With the lapse of time and a wider experience I gave up this view, and now I see nothing ethically wrong or practically impossible in conducting such a surgery to the advantage of both patients and doctor. The surgery becomes a private out-patient department; the hospitals are available for such cases as require them; the district nurse for those who can be attended in their own homes; and the doctor himself, besides being successful from a business point of view, has abundant material for the development of his knowledge and diagnostic acumen.

ANSWERS.

LEGES has omitted to verify his communication with his name.

ANTISEPTIC PROPERTIES OF ALCOHOL.

BATHONIAN.—Alcohol is seldom used to disinfect instruments. It is stated that absolute alcohol is inert; some authorities give 96 per cent. as the most useful strength, others 70 to 80 per cent. So far as disinfection of the skin is concerned, full information will be found in Meissner's article on the subject in *Beitrage z. klin. Chir.*, Bd. 58, p. 191. A recent paper on the influence of various antiseptics on various bacteria is to be found in *Desinfection Monatsschrift*, 1909, Hft. 7. Fürbinger has written a good deal on alcohol as a disinfectant. A great many references are to be found in Lockwood's book on *Aseptic Surgery* (Oxford Medical Manuals, 1909).

STOVE FOR INVALID'S BEDROOM.

H. H. writes: If "H." will pack the fire grate with pieces of coal as he would pack a child's bricks into the box, and fill the interstices with coal dust, then light a fire on the top, he will have the ideal fire for a sick room. It will burn without attention for twelve to twenty-four hours if well laid. The process of lighting a slow combustion fire was thus described in the *Daily Chronicle* a few weeks ago: Take some pieces of coal, of a suitable size, and pack the grate with them, as closely as they will lie, having placed one layer on the bottom of the grate, fill the cracks between the coals with coal dust, then put a second layer of pieces of coal, and fill with dust as before, and so do till the grate is full to the top bar; then with paper, wood, and coal, or with a fire lighter, proceed to make a fire on the top of the filled grate, feed this with cinders or pieces of coal till it is well burning. Then the fire will burn for twelve or more hours according to the care with which the grate has been filled. My library grate is an old-fashioned hob grate; when the fire has been lighted in this manner, it has burnt from 10 one day to noon the next; of course it is not a fierce fire, and it should not be poked. The tighter the coal is packed the slower the combustion. Coke and coal dust will make a good fire, but is not so lasting.

LETTERS, NOTES, ETC.

THE COLLEGE REFORM.

DR. H. ELLIOT-BLAKE (Bognor) writes: A degree for London medical students has been accessible for close on 100 years, both the Royal Colleges of Physicians and Surgeons simply stopping all extension of that principle in London, and therefore retaining the unfortunate imposition or popularity of the

colleges. So that is not the question to be pursued, and I will be pardoned for sticking to the real issue—the reform of the colleges. It would, indeed, be foolish, if not a waste of effort, not to occupy this Royal Commission so as to end the colleges. On every side their day and even their influence on teaching is ended. Of course, the movers in this medical reform movement are entirely in the hands of the councils of the colleges and the Senate of the University, but it is to be hoped that these councils will be handed down to posterity as having risen above party spirit and were capable of the broad-minded decision of this reform, and thus alone can the decision of the old and last councils of the old régime be distinguished from those who toyed with less sincere, crude, and abortive efforts. Within the last few years such impression has been made, thanks to our enlightened medical press, that both parties not only desire to benefit by the college question and reform, but they have realized the necessity of joining together. The report of the college delegates shows an enormous advance on the old college degree idea and on that of the separate university scheme. The whole profession, the University of London, and especially the Fellows and Members, will attach great importance and appreciation to the one vital addition, under "*Evidence should be given*": (ii.) "The course of education of the London University student should be brought into relation with the examination." If properly carried out, it covers the whole of my reform suggestions. We have never had anything before approaching that completeness. That would be a real and not a sham junction with the university. We can congratulate them on that broad, unselfish, and careful application to the details of this abused question; and some of us have been roundly abused! Although their position happens to be just the executive power of office, still it might have been selfishly applied; instead, the confidence in their experience has been justified.

Criticism on this good report would be *de trop*, especially from one who must and does know many of their difficulties, and is more of a compliment, considering the chaos of the old situation that those who have busied themselves of yore well remember. With the report, and from an initiatory point of view, the statistics may be availed of for the Royal Commission. But, technically, the set parts of the percentages, like all percentages, are apt to vary according to the variations in taking them over closely similar periods, and a very different inference might be better drawn from and according to the arrangements there. However, the two chief and definite characters stand out deducible and irreducible, and they follow my previous contentions that the medical students in London have much diminished, and in the colleges from 1,265 in 1891 to 605 in 1904. That has nothing to do with the puny relative incidence that so unnecessarily hampers some writers. It is a solid argument in favour of this college reform.

Responsible suggestions that may be useful have to be carefully broached in face of this capable and strong report, but two weak points do require stiffening. It is useless to delay the necessary sacrificial remedy further for a paltry generation at the outside, and for the subsequent trouble of another Royal Commission or agitation, or simply to satisfy the old retention of accreted power. No; immediate action will be welcome between the colleges and the university, and for the junction of the two bodies. Acquisition is one thing, but fruition and marked production transcend both in comprehension and greatness. These accepted reservations refer to (1) "7," the essential cross question, to retain their "complete autonomy"; and to (2) "matriculation," a preliminary examination recognized only by the Royal Colleges. The former would simply be the negation of the complete plan, it would promote the continued negotiation of the separatist policy, and it renders the scheme totally non-assimilable, with the absolute necessity for a stronger medical and university front for our profession in London. Any fear about the other colleges has never shown them to be at all possible rivals of the London. They will either have to follow suit, or the Medical Council may advise their discontinuance when the London advance is accomplished. At any rate, their teaching or position is not what is now expected for the training of medical students. The only other opposition—the bark about the lowering of the standards—has been long drowned by the wave of sense. The question, therefore, is "how" and which, to use a bull, is no reply. The direct way will be an immediate or a gradual protectorial fusion over five years with interchangeable examinations, and after that period only one set of examinations. That would pool the fees first, and provide for State-aid claim on account of performing a public duty. It would be very wanton to lose this great opportunity under the auspices of the Royal Commission, and it should not be spoilt over figmentary contentions about bits of power. I am alive to the higher forms of difficulties, and over past responsibilities and legal obligations, legacies, trusts, the library, and the public museum. But these public obligations provide all the stronger lever to be wielded in the hands of the councils as a consolidation argument for the university. Certainly, for that separate and executive part an autonomic board would have its foundation and recommendation. But for the conjoint teaching and interchangeable examinations there ought to be a direct fusion, and only one University Conjoint Board. Under that collegiate and university reciprocation, and with the object of retaining the epithet "Royal" to the colleges, perhaps the Conjoint Board would be called "The University of London and Royal Colleges of Medicine Examining Board."

In the second instance, there is still the hesitancy and belief in the necessity of the college preliminaries. For one thing, it hurts no one but the possessor; so that the university who have woken up to their responsibility to provide teaching for all—or they should do—could hardly seriously persevere in an objection against allowing these college students to matriculate for the agreed-upon term in their university, and under the rearrangement, so long as they paid the sustaining fees and passed in their degree subjects, or under any other condition. The direct plan would then be for the University and Royal Colleges of Medicine Faculty Board to issue a circular of intimation and demand to the "Preceptors" or other preliminary examining bodies warning them to adjust their examinations to the minimum standards acceptable, their acceptance would assuredly be obtained. Considering the close agreements already reached, it would be fatal to the scheme to accept any less policy than combination, or to attempt to entice students to London and into the university teaching—which must be the projection—and then not allow candidates to go in for any degrees for which they chose to be instructed. The terribly feared leniency in the combined examinations would only, at most, extend over the first few years. London, there and then, would be furnished as a university centre, for all time, for all medical students in London. It would carry out the whole of my object in this reform movement, not only to level the Medical Teaching Institution up to a university stamp in London—in either pass or honours section, at the candidate's free option, and not starved out as at present—and so to carry out the necessary full junction of the Royal Medical Colleges with the University of London, which constitutes the best part of the "medical college reform."

THE EFFECTS OF ABDOMINAL COMPRESSION ON VERY RAPID HEART.

DR. T. STRETCH DOWSE (Exmouth) writes: In the interest of your readers relative to the very grave question of heart failure and abnormal heart rhythm, so well illustrated by Dr. Gordon's case—(? bulbar and spinal shock)—treated by abdominal compression, I am anxious to draw their most serious attention to the work of Dr. Leonard Hill, *On the Physiology and the Pathology of the Cerebral Circulation*, published by Churchill in 1896. In this work they will find the whole question of vasomotor paresis of the splanchnic area and anaemia of the bulbar centres fully and graphically demonstrated and explained by actual physiological experiment. How these valuable researches have failed to be recognized and reduced to far-reaching practical utility by clinicians passes my comprehension.

TWO CASES OF IDIOSYNCRASY.

DR. REDMOND ROCHE (London, S.W.) writes: A male patient, aged 33, a *bon vivcur*, underwent at my hands three minor operations in the past two years; in each case chloroform was administered. Within twenty-four hours in each instance jaundice supervened; bile appeared in the urine and stained the conjunctivae. Ultimately the jaundice cleared up completely. In this case the same individual presented chloroform jaundice three times. Another patient—male, aged 45—has had administered to him on three different occasions, at intervals of about a year, very small doses of a coal-tar product—phenacetin once, antipyrin twice; last time only one 5 grain dose was taken. On each occasion almost immediately a curious condition supervened entirely confined to the mouth. The lips were considerably swollen, the mouth became very sore, and the gums were tender, but no ulceration followed. This condition was quite distressing—admitted only of soft food being taken, and lasted for several days.

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